



Yasin N. Silva

Curriculum Vitae

January 11, 2021

Mail Code 2352, P.O. BOX 37100
Phoenix, AZ 85069

Phone: (602) 543-2818
Fax: (602) 543-6073

Email: ysilva@asu.edu

Webpage: www.public.asu.edu/~yasilva

Employment

Associate Professor - School of Mathematical and Natural Sciences, New College of Interdisciplinary Arts and Sciences, Arizona State University, Phoenix, AZ, 2016 - Present

Assistant Professor - School of Mathematical and Natural Sciences, New College of Interdisciplinary Arts and Sciences, Arizona State University, Phoenix, AZ, 2010 - 2016

Research Intern - Microsoft Research, Redmond, WA, May - July 2009

- Carried out research in the area of Cloud Computing – Web-scale Data Management Systems with Paul Larson and Jingren Zhou (Database group).
- Enhanced the optimizer of SCOPE (Easy and Efficient Parallel Processing of Massive Data Sets), a massive data distributed management system, to make effective use of common sub-expressions and significantly improve the execution time of queries that process Microsoft MSN log files.

Research Intern - IBM Research – Almaden Research Center, San Jose, CA, June - September 2008

- Carried out research in the area of Self-Organizing Databases with Guy Lohman and Sandeep Tata (Information Management group).
- Designed and prototyped a data management system that can inherently support unstructured and structured data. The designed architecture supported the incremental and provenance-aware extraction of structure, and the incremental querying of the data.

Research Assistant - Purdue University, West Lafayette, IN, January 2007 - May 2009

- Member of the NIH-funded EcoliHub project.
- Designed and implemented a novel system that detects and reports conflicts among multi-source XML documents that describe biological objects like genes and proteins.

Teaching Assistant - Purdue University, West Lafayette, IN, August 2004 - December 2006, August 2009 – May 2010

- Teaching Assistant for CS541 Database Systems (graduate level), and PSO (Practice, Study, and Observation) and lab instructor for CS348 Information Systems (undergraduate level).

Software Engineer Intern - Imaginestics, LLC. West Lafayette, IN, May - July 2005

- Created and tuned a web-based system to support different applications that manipulate databases of complex geometric objects.
- Developed distributed applications and integrated web services.

Co-founder and Manager - Eurisko Technologies C.A.S. Lima, Peru, October 2001 - December 2003

- Carried out design and development of database administration and tuning tools using Object Oriented technology.

Education

Purdue University, West Lafayette, IN, August 2004 - August 2010

- Ph.D. Computer Science. August, 2010. GPA: 3.9/4.0.
Advisor: Walid G. Aref.
Dissertation: “*Similarity-aware Query Processing and Optimization.*”
Silva, Yasin N. 2010. *Similarity-aware query processing and optimization*. PhD dissertation, Purdue University. Ann Arbor: ProQuest/UMI. (Publication No. AAT 3444780.)
Available: <http://search.proquest.com/docview/859202052>
- M.S. Computer Science. May 2006. GPA: 3.8/4.0.
- Applied Management Principles program. Krannert School of Management. May 2008.

Pontificia Universidad Católica del Perú (PUCP), Lima, Peru, March 1995 - August 2000

- B.S. Computer Engineering. October 2001. Graduated second in class.

Academic Awards/Honors/Fellowships

- Finalist for the Innovator of the Year Award (Academia) at the 2018 Arizona Governor’s Celebration of Innovation Awards. November 2018.
- Outstanding Innovation Award 2017-2018. New College of Interdisciplinary Arts and Sciences, ASU. May 2018.
- Selected by the College of Science at Purdue University for the Applied Management Principles (AMP) program offered by the Krannert Graduate School of Management. 2008.
- Member of Upsilon Pi Epsilon, the International Honor Society for the Computer Sciences. June 2006.
- Graduate Student Award for Outstanding Teaching. Purdue University - Department of Computer Science, April 2006.
- Siemens Corporation Scholarship. April 2006.
- The Motorola Scholarship for Entrepreneurship. January 2002.
- Second place in the 1st Andean Contest of Technological Innovation. November 2001.
- First place in the Software Project Contest of the 8th International Conference of Electronics and Systems Engineering INTERCON IEEE. 2001.
- Obtained the qualification of “Outstanding” - the highest distinction given to a B.S. thesis work at the Pontifical Catholic University of Peru. Thesis –“Database Administration Focused in Optimization for Multiple Database Platforms”– defended in October 2001.
- First place in the 8th Software Project Contest organized by the National University of Engineering, Peru. 2001.

Publications

- In my core areas of research (data management, database systems), publishing in conferences is, in general, preferred to publishing in journals. The premier conferences are generally more selective than the premier journals. <http://cra.org/resources/bp-view/evaluating-computer-scientists-and-engineers-for-promotion-and-tenure/>
- A common practice in my areas of research is to order the authors of a publication based on the amount of their contributions. The first author is the person with the largest contribution
- Undergraduate student co-authors are underlined.
- Graduate student co-authors are identified with an asterisk (*) and mentored postdocs with a plus sign (+).
- System demonstration papers represent core contributions of my system-oriented research. They present innovative and fully implemented systems and algorithms.
- Citation counts were obtained from Google Scholar.

Refereed Journal Articles

- L. Cheng*, R. Guo*, **Y. N. Silva**, D. Hall, H. Liu. *Modeling Temporal Patterns of Cyberbullying with Hierarchical Attention Network*. **ACM/IMS Transactions on Data Science**, 2020 (11 pages).
- L. Cheng*, **Y. N. Silva**, D. Hall, H. Liu. *Session-based Cyberbullying Detection: Problems and Challenges*. **IEEE Internet Computing**, 2020 (9 pages). Impact factor:4.23 (2019 Clarivate Analytics Journal Citation Reports).
- C. Rong, L. Chen, **Y. N. Silva**. *Parallel Time Series Join using Spark*. **Concurrency and Computation: Practice and Experience**, 2020, DOI: 10.1002/cpe.5622 (15 pages). Impact factor:1.167 (2018 ISI Journal Citation Reports).
- P. Cech*, J. Lokoc, **Y. N. Silva**. *Pivot-based Approximate k-NN Similarity Joins for Big High-dimensional Data*. **Information Systems**, 87, January, 2020, DOI: 10.1016/j.is.2019.06.006 (18 pages). 5-Year Impact Factor: 2.678 (2018 Journal Citation Reports, Clarivate Analytics). Number of Citations: 0.
- **Y. N. Silva**, D. Hall, C. Rich. *BullyBlocker: Toward an Interdisciplinary Approach to Identify Cyberbullying*. **Social Network Analysis and Mining (SNAM)**, 8, 18, 2018, DOI: 10.1007/s13278-018-0496-z (15 pages). Impact: 1.216 (Source Normalized Impact per Paper - 2016, Springer).
- C. Rong⁺, **Y. N. Silva**, C. Li. *String Similarity Join with Different Similarity Thresholds Based on Novel Indexing Techniques*. **Frontiers of Computer Science (FCS)**, 11, 2, pp 307-319, 2017 (13 pages). Impact Factor: 0.660 (2015, Journal Citation Reports, Thomson Reuters). Number of Citations: 0.
- M. Tang, R. Y. Tahboub, W. G. Aref, M. J. Atallah, Q. M. Malluhi, M. Ouzzani, **Y. N. Silva**. *Similarity Group-by Operators for Multi-dimensional Relational Data*. **IEEE Transactions on Knowledge and Data Engineering (TKDE)**, 28, 2, pp 510-523, 2016 (12 pages). Impact Factor: 2.067 (2014, Journal Citation Reports, Thomson Reuters). Number of Citations: 1.
- **Y. N. Silva**, S. Pearson, J. Chon, R. Roberts. *Similarity Joins: Their Implementation and Interactions with Other Database Operators*. **Information Systems**, 52, August-September, pp 149-162, 2015, DOI: 10.1016/j.is.2015.01.008 (14 pages). 5-Year Impact Factor: 2.678 (2018 Journal Citation Reports, Clarivate Analytics). Number of Citations: 0.
- **Y. N. Silva**, W. G. Aref, P. -A. Larson, S. Pearson, M. Ali. *Similarity Queries: Their Conceptual Evaluation, Transformations, and Processing*. **The International Journal on Very Large Data Bases (VLDB Journal)**, 22, 3, pp 395-420, 2013, DOI: 10.1007/s00778-012-0296-4 (26 pages + 13 pages of electronic supplementary material). Impact Factor: 4.269 (2016, Journal Citation Reports, Thomson Reuters). VLDBJ is the journal with the highest impact factor in the area of database systems. Number of Citations: 22.
- M. Y. Eltabakh, J. Padma, **Y. N. Silva**, P. He, W. G. Aref, E. Bertino. *Query Processing with k-Anonymity*. **International Journal of Data Engineering (IJDE)**, 3, 2, pp 48-65, 2012 (18 pages). Number of Citations: 1.
- **Y. N. Silva**, X. Xiong, W. G. Aref. *The RUM-tree: Supporting Frequent Updates in R-trees Using Memos*. **The International Journal on Very Large Data Bases (VLDB Journal)**, 18, 3, pp 719-738, 2009, DOI: 10.1007/s00778-008-0120-3 (20 pages). Impact Factor: 4.269 (2016, Journal Citation Reports, Thomson Reuters). VLDBJ is the journal with the highest impact factor in the area of database systems. Number of Citations: 25.

Refereed Conference Papers

- D. Mosallanezhad*, **Y. N. Silva**, M. V. Mancenido, H. Liu. *Toward Privacy and Utility Preserving Image Representation*. **The International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRIMS)**, Washington DC, USA, 2020 (working paper, 10 pages).

- L. Cheng*, K. Shu*, S. Wu*, **Y. N. Silva**, D. Hall, H. Liu. *Unsupervised Cyberbullying Detection via Time-Informed Deep Clustering*. The 29th ACM International Conference on Information and Knowledge Management (**CIKM**), 2020 (10 pages, acceptance rate: 21%).
- A. Gupta*, W. Yang*, D. Sivakumar*, **Y. N. Silva**, D. L. Hall, M. C. Nardini Barioni⁺. *Temporal Properties of Cyberbullying on Instagram*. The 5th Workshop on Computational Methods in Online Misbehavior (**CyberSafety**), Taipei, Taiwan, 2020. In Companion Proceedings of the ACM Web Conference 2020 (**WWW**), 576–583, DOI: 10.1145/3366424.3385771 (8 pages, acceptance rate: 33%). **Best paper award**.
- **Y. N. Silva**, M. Sandoval, D. Prado, X. Wallace, C. Rong. *Similarity Grouping in Big Data Systems*. The 12th International Conference on Similarity Search and Applications (**SISAP**), Newark, NJ, USA, 2019. Springer LNCS, 11807, pp 212-220, 2019 (9 pages).
- L. Cheng*, J. Li*, **Y. N. Silva**, D. Hall, H. Liu. *PI-Bully: Personalized Cyberbullying Detection with Peer Influence*. The 28th International Joint Conference on Artificial Intelligence (**IJCAI**), Macao, China, 2019 (7 pages, acceptance rate: 17.9%).
- L. Cheng*, R. Guo*, **Y. N. Silva**, D. Hall, H. Liu. *Hierarchical Attention Networks for Cyberbullying Detection on the Instagram Social Network*. The SIAM International Conference on Data Mining (**SDM**), Alberta, Canada, 2019 (9 pages, acceptance rate: 22.7%). **This paper was highlighted in a SIAM press release**.
- L. Cheng*, J. Li*, **Y. N. Silva**, D. Hall, H. Liu. *XBully: Cyberbullying Detection within a Multi-Modal Context*. The 12th ACM International Conference on Web Search and Data Mining (**WSDM**), Melbourne, Australia, 2019 (9 pages, acceptance rate: 16%).
- L. Cheng*, **Y. N. Silva**, D. Hall, H. Liu. *Personalized Learning for Cyberbullying Detection*. The **SBP-BRiMS Doctoral Consortium** (Doctoral Consortium of the International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction and Behavior Representation in Modeling and Simulation), Washington DC, USA, 2018 (3 pages).
- **Y. N. Silva**, A. Nieuwenhuys, T. G. Schenk, A. Symons. *DBSnap++: Creating Data-driven Programs by Snapping Blocks*. The 23rd ACM Annual Conference on Innovation and Technology in Computer Science Education (**ITiCSE**), Larnaca, Cyprus, 2018 (6 pages, acceptance rate: 29%).
- P. Cech*, J. Marousek, J. Lokoc, **Y. N. Silva**, J. Starks. *Comparing MapReduce-based k-NN Similarity Joins on Hadoop for High-dimensional Data*. The 13th International Conference on Advanced Data Mining and Applications (**ADMA**), Singapore, 2017 (13 pages, acceptance rate 49%).
- C. Rong⁺, C. Lin, **Y. N. Silva**, J. Wang, W. Lu, X. Du. *Fast and Scalable Distributed Set Similarity Joins for Big Data Analytics*. The 33rd IEEE International Conference on Data Engineering (**ICDE**), San Diego, CA, USA, 2017 (12 pages, acceptance rate 17.7%). Number of Citations: 0.
- **Y. N. Silva**, J. M. Reed, A. Wadsworth, K. Brown, C. Rong⁺. *An Experimental Survey of MapReduce-based Similarity Joins*. The 9th International Conference on Similarity Search and Applications (**SISAP**), Tokyo, Japan, 2016. Springer LNCS, 9939, pp 181-195, 2016 (14 pages, acceptance rate 38%). Number of Citations: 0.
- **Y. N. Silva**, C. Rich, J. Chon, L. M. Tsosie. *BullyBlocker: An App to Identify Cyberbullying in Facebook*. The 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM**), San Francisco, CA, USA, 2016 (system demonstration paper, 5 pages, acceptance rate 33%). Number of Citations: 0.
- **Y. N. Silva**, I. Almeida, M. Queiroz. *SQL: From Traditional Databases to Big Data*. The 47th ACM Technical Symposium on Computer Science Education (**SIGCSE**), Tennessee, USA, 2016 (6 pages, acceptance rate 35%). Number of Citations: 0.
- **Y. N. Silva**, J. Chon. *DBSnap: Learning Database Queries by Snapping Blocks*. The 46th ACM Technical Symposium on Computer Science Education (**SIGCSE**), Missouri, USA, 2015 (6 pages, acceptance rate 36%). Number of Citations: 2.

- **Y. N. Silva, J. Chon.** *Querying Databases by Snapping Blocks*. The 31st IEEE International Conference on Data Engineering (**ICDE**), Seoul, Korea, 2015 (system demonstration paper, 4 pages, acceptance rate 39.7%). Number of Citations: 0.
- **S. Pearson, Y. N. Silva.** *Index-based R-S Similarity Joins*. The 7th International Conference on Similarity Search and Applications (**SISAP**), Los Cabos, Mexico, 2014. Springer LNCS, 8821, pp 106-112, 2014 (7 pages, acceptance rate 46.6%). Number of Citations: 4.
- **Y. N. Silva, S. W. Dietrich, J. M. Reed, L. M. Tsosie.** *Integrating Big Data into the Computing Curricula*. The 45th ACM Technical Symposium on Computer Science Education (**SIGCSE**), Atlanta, USA, 2014 (6 pages, acceptance rate 39.4%). Number of Citations: 9.
- **Y. N. Silva, S. Pearson, J. A. Cheney.** *Database Similarity Join for Metric Spaces*. The 6th International Conference on Similarity Search and Applications (**SISAP**), A Coruña, Spain, 2013. Springer LNCS, 8199, pp 266-279, 2013 (14 pages, acceptance rate 40.9%). Number of Citations: 8. **Selected as one of the best conference papers.**
- **Y. N. Silva, S. Pearson.** *Exploiting Database Similarity Joins for Metric Spaces*. The Proceedings of the VLDB Endowment (**PVLDB**), 5, 12, pp 1922-1925, 2012 (system demonstration paper, 4 pages, acceptance rate 33.7%). Number of Citations: 10.
- **Y. N. Silva, J. M. Reed, L. M. Tsosie.** *MapReduce-based Similarity Join for Metric Spaces*. The VLDB International Workshop on Cloud Intelligence (**VLDB/Cloud-I**), Istanbul, Turkey, 2012 (8 pages, acceptance rate 53%). Number of Citations: 6.
- **Y. N. Silva, J. M. Reed.** *Exploiting MapReduce-based Similarity Joins*. The 2012 ACM SIGMOD International Conference on management of data (**SIGMOD**), Scottsdale, USA, 2012 (system demonstration paper, 4 pages, acceptance rate 42%). Number of Citations: 19.
- **Y. N. Silva, P. -A. Larson, J. Zhou.** *Exploiting Common Subexpressions for Cloud Query Processing*. The 28th International Conference on Data Engineering (**ICDE**), Washington, DC, USA, 2012 (12 pages, acceptance rate 31.6%). Number of Citations: 21.
- **Y. N. Silva, W. G. Aref, M. Ali.** *The Similarity Join Database Operator*. The 26th International Conference on Data Engineering (**ICDE**), Los Angeles, USA, 2010 (12 pages, acceptance rate 12%). Number of Citations: 43.
- **Y. N. Silva, A. M. Aly, W. G. Aref, P. -A. Larson.** *SimDB: A Similarity-aware Database System*. The 2010 ACM SIGMOD International Conference on Management of Data (**SIGMOD**), Indianapolis, USA, 2010 (system demonstration paper, 4 pages, acceptance rate 36.8%). Number of Citations: 22.
- **M. Eltabakh, W.G. Aref, A. Elmagarmid, Y.N. Silva, M. Ouzzani.** *Supporting Real-world Activities in Database Management Systems*. The 26th International Conference on Data Engineering (**ICDE**), Los Angeles, USA, 2010 (4 pages, acceptance rate 20%). Number of Citations: 3.
- **Y. N. Silva, W. G. Aref, M. Ali.** *Similarity Group-by*. The 25th International Conference on Data Engineering (**ICDE**), China, 2009 (12 pages, acceptance rate 17%). Number of Citations: 30.
- **Y. N. Silva, W. G. Aref.** *Similarity-aware Query Processing and Optimization*. **VLDB PhD Workshop**, France, 2009 (6 pages, acceptance rate 46.4%). Number of Citations: 4.
- **Y. N. Silva, M. Arshad, W. G. Aref.** *Exploiting Similarity-aware Grouping in Decision Support Systems*. The 12th International Conference on Extending Database Technology (**EDBT**), Russia, 2009 (system demonstration paper, 4 pages, acceptance rate 37.5%). Number of Citations: 6.
- **J. Padma, Y. N. Silva, M. Arshad, W. G. Aref.** *Hippocratic PostgreSQL*. The 25th International Conference on Data Engineering (**ICDE**), China, 2009 (system demonstration paper, 4 pages, acceptance rate 27%). Number of Citations: 8.
- **M. Eltabakh, W. G. Aref, A. Elmagarmid, M. Ouzzani, Y. N. Silva.** *Supporting Annotations on Relations*. The 12th International Conference on Extending Database Technology (**EDBT**), Russia, 2009 (12 pages, acceptance rate 32.5%). Number of Citations: 26.

- M. Eltabakh, M. Ouzzani, W. G. Aref, A. Elmagarmid, **Y. N. Silva**, D. Salt, I. Baxter. *Managing Biological Data using bdbms*. The 24th International Conference on Data Engineering (**ICDE**), México, 2008 (system demonstration paper, 4 pages, acceptance rate 36%). Number of Citations: 21.
- **Y. N. Silva** and W. G. Aref. *Realizing Privacy-Preserving Features in Hippocratic Databases*. 23rd International Conference on Data Engineering Workshops: 3rd International Workshop on Privacy Data Management (**ICDE/PDM**), Turkey, 2007 (9 pages, acceptance rate 30%). Number of Citations: 5.

Refereed Book Chapters

- **Y. N. Silva**, J. M. Reed, L. M. Tsosie, T. Matti. *Similarity Join for Big Geographic Data*. In *Geographical Information Systems: Trends and Technologies*, E. Pourabbas (Ed.), pp 20-49, **CRC Press**: Boca Raton, Florida, 2014 (30 pages).

Peer-reviewed Posters (with poster papers or abstracts)

- B. Wheeler*, K. Baumel*, D. Hall, Y. Silva. *Understanding Parents' Intentions to Use Anti-Bullying Apps: An Interdisciplinary Approach*. The Annual Meeting of the Society for Personality & Social Psychology (**SPSP**), 2021.
- B. Wheeler*, L. Cheng*, D. Hall, **Y. Silva**. *BullyBlocker: Integrating Data, Computer, and Psychological Science to Identify Cyberbullying on Social Media*. The 2020 Women in Statistics and Data Science Conference (**WSDS**), 2020.
- K. Schodt*, C. Shao*, D. Hall, Y. Silva. *How much is too much?: The moderating role of social media use in the relation between psychological risk factors and cyberbullying victimization and perpetration*. The Annual Meeting of the Society for Personality & Social Psychology (**SPSP**), Portland, OR, USA, 2019.
- W. Yang*, L. Cheng*, K. Schodt*, C. Shao*, D. Hall, Y. Silva. *An interdisciplinary investigation of temporal aspects of cyberbullying on Instagram*. The Annual Meeting of the Society for Personality & Social Psychology (**SPSP**), Portland, OR, USA, 2019.
- L. Jiang*, A. Trow*, V. Delgadillo, C. Sanchez, L. Cheng*, **Y. Silva**, D. Hall. *An Interdisciplinary Investigation of Temporal Aspects of Cyberbullying*. The Western Psychological Association (**WPA**) Convention, Portland, OR, USA, 2018.
- A. Trow*, L. Jiang*, L. Cheng*, C. Sanchez, V. Delgadillo, D. Hall, **Y. Silva**. *BullyBlocker: Detecting Cyberbullying Victimization Risk through an Interdisciplinary Identification Model*. The Western Psychological Association (**WPA**) Convention, Portland, OR, USA, 2018.
- **Y. N. Silva**, C. Rich, D. Hall. *BullyBlocker: Towards the Identification of Cyberbullying in Social Networking Sites*. The 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM**), San Francisco, CA, USA, 2016 (poster paper included in conference proceedings: 3 pages, overall acceptance rate 31%).
- M. Tang, R. Y. Tahboub, W. G. Aref, M. J. Atallah, Q. M. Malluhi, M. Ouzzani, **Y. N. Silva**. *Similarity Group-by Operators for Multi-dimensional Relational Data*. The 32nd IEEE International Conference on Data Engineering (**ICDE**), Helsinki, Finland, 2016 (poster paper included in conference proceedings: 2 pages).
- L. M. Tsosie, **Y. N. Silva**. *Facebully: Towards the Identification of Cyberbullying in Facebook*. The Grace Hopper Celebration of Women in Computing (**GHC**), Minnesota, USA, 2013 (extended poster abstract: 3 pages).

Manuscripts under Review

Refereed Journal Articles

- K. B. Schodt*, D. L. Hall, **Y. N. Silva**, C. Shao*. *The moderating role of social media use in the link between psychological health and cyberbullying*. *Cyberpsychology, Behavior, and Social Networking*. (17 pages).
- H. Razente⁺, M. C. Nardini Barioni⁺, **Y. N. Silva**. *Storing Data Once in M-trees and PM-trees: Revisiting the Building Principles of Metric Access Methods*. (24 pages).

- C. Rong⁺, C. Lin, Y. N. Silva, J. Wang, W. Lu, X. Du. *Distributed Set Similarity Joins for Big Data Analytics using Vertical Partitioning*. (28 pages).

Refereed Conference Papers

- Y. N. Silva, A. Loza, H. Razente⁺, R. Kingsbury, S. Kothari. *DBSnap-Eval: Identifying Database Query Construction Patterns*. (7 pages)

Refereed Conference Posters

Research and Manuscripts in Progress (Undergraduate students are underlined)

Research in Progress

- Y. N. Silva, C. Rong, X. Wallace, M. Sandoval Madrigal, D. Prado. *Design, Implementation, and Evaluation of Similarity-aware Algorithms for Big Data*.
- Y. N. Silva, D. Hall, L. Chen^{*}, D. Prakash^{*}, P. Solanki^{*}, H. Seeley^{*}, S. Thibault^{*}, Y. Belorkar^{*}, K. Schodt^{*}, W. Yang^{*}, C. Shao^{*}, T. Strom, J. Spokes, J. Kloberdanz. *Identifying Cyberbullying in Social Networking Sites*.
- Y. N. Silva, A. Stark, A. Loza. *Block-based Systems for Creating Database Queries*.

Published or Technical Reports (Undergraduate co-authors are underlined)

- Y. N. Silva, J. M. Reed, and L. M. Tsosie. *Technical report: MapReduce-based similarity joins*. Technical report, Arizona State University, 2012. Number of Citations: 1.
- Y. N. Silva, W. G. Aref, P. -A. Larson, S. S. Pearson, M. H. Ali. *Similarity queries-transformation rules and proofs*. Technical report, Arizona State University, 2012. Number of Citations: 1.
- Y. N. Silva and W. G. Aref. *Realizing Privacy-preserving Features in Hippocratic Databases*. Technical Report CSD TR #06-022, Purdue University, 2006.

Research Presentations (Undergraduate students are underlined)

Invited Presentations

- Y. N. Silva and D. L. Hall. *BullyBlocker: Identifying Cyberbullying in Social Networking Sites*. The 4th NSF Secure and Trustworthy Cyberspace Principal Investigator Meeting (2019 SaTC PI Meeting), Alexandria, VA, 2019. Poster presentation.
- Y. N. Silva. *Similarity Joins for Big Data Analytics and Other Research Projects*. **SenSIP Seminar on Big Data**, Sensor, Signal & Information Processing Center, Arizona State University, Arizona, USA, November 03, 2017.
- Y. N. Silva. *Set Similarity Joins for Big Data Analytics*. **Big Data Seminar**, Arizona State University, Arizona, USA, April 27, 2017.
- Y. N. Silva. *Big Data Queries and Operators*. **Analytics@ASU CyberMonday Ted-Like Talks**, Arizona State University, Arizona, USA, November 30, 2015.
- Y. N. Silva, L. M. Tsosie, C. Rich, J. Chon. *BullyBlocker: Identifying Cyberbullying in Facebook*. System and poster presentation. ASU President's Weekend, Arizona State University, Arizona, USA, November 7, 2014.
- *Similarity Queries*. Department of Computer Science, **University of Salzburg**, Salzburg, Austria, July 11, 2013.
- *Similarity-aware Data Processing*. Keynote speaker at the Swiss Feed Database Workshop, **University of Zurich**, Zurich, Switzerland, July 8, 2013.
- *Optimization of Cloud Queries*. PUCP International Colloquium, **Pontificia Universidad Católica del Perú**, Lima, Peru, June 3, 2011.
- *Similarity-aware Query Processing and Optimization*. Cloud Computing Center Colloquium, **University of Maryland**, Maryland, USA, February 22, 2010.

Refereed Conference Presentations

- **Y. Silva**, H. Razente, **M. Barden**, **H. Flynn**. *DBSnap: A Block-based Database Querying App*. Snap!Con 2020. Conference talk.
- B. Wheeler*, K. Baumel*, X. Liu*, S. Quiroz*, D. Hall, **Y. Silva**. *It takes a village: Age and desire for social support predict parents' anti-bullying app use*. The Western Psychological Association (WPA) Convention, San Francisco, CA, USA, 2020. Symposium talk.
- K. Baumel*, B. Wheeler*, X. Liu*, S. Quiroz*, D. Hall, **Y. Silva**. *Child's bullying history predicts parents' intentions to use anti-bullying apps*. The Western Psychological Association (WPA) Convention, San Francisco, CA, USA, 2020. Symposium talk.
- X. Liu*, S. Quiroz*, D. Hall, **Y. Silva**. *Temporal shifts in the nature and study of cyberbullying on social media: A meta-analytic investigation*. The Western Psychological Association (WPA) Convention, San Francisco, CA, USA, 2020. Symposium talk.
- A. Gupta*, W. Yang*, D. Sivakumar*, **Y. N. Silva**, D. L. Hall, M. C. Nardini Barioni⁺. *Temporal Properties of Cyberbullying on Instagram*. The 5th Workshop on Computational Methods in Online Misbehavior (CyberSafety), Taipei, Taiwan, 2020. Paper presentation.
- **Y. N. Silva**, **M. Sandoval**, **D. Prado**, **X. Wallace**, C. Rong. *Similarity Grouping in Big Data Systems*. The 12th International Conference on Similarity Search and Applications (SISAP), Newark, NJ, USA, 2019. Paper and poster presentation.
- **Y. N. Silva**, **A. Nieuwenhuys**, **T. G. Schenk**, **A. Symons**. *DBSnap++: Creating Data-driven Programs by Snapping Blocks*. The 23rd ACM Annual Conference on Innovation and Technology in Computer Science Education (ITiCSE), Larnaca, Cyprus, 2018. Paper presentation.
- C. Shao*, D. L. Hall, **Y. N. Silva**. *From Theory to Practice: An Integrated Model for Cyberbullying on Social Media*. Annual Conference of the International Association of Media and Communication Research (IAMCR), Eugene, Oregon, USA, 2018. Paper presentation.
- C. Rong, C. Lin, **Y. N. Silva**, J. Wang, W. Lu, X. Du. *Fast and Scalable Distributed Set Similarity Joins for Big Data Analytics*. The 33rd IEEE International Conference on Data Engineering (ICDE), San Diego, CA, USA, 2017. Paper and poster presentation. Presented with C. Rong.
- **Y. N. Silva**, J. M. Reed, **A. Wadsworth**, **K. Brown**, C. Rong. *An Experimental Survey of MapReduce based Similarity Joins*. The 9th International Conference on Similarity Search and Applications (SISAP), Tokyo, Japan, 2016. Paper and poster presentation.
- **Y. N. Silva**, **C. Rich**, J. Chon, L. M. Tsosie. *BullyBlocker: An App to Identify Cyberbullying in Facebook*. The 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), San Francisco, CA, USA, 2016. System demonstration.
- **Y. N. Silva**, **C. Rich**, D. Hall. *BullyBlocker: Towards the Identification of Cyberbullying in Social Networking Sites*. The 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), San Francisco, CA, USA, 2016. Paper and poster presentation.
- **Y. N. Silva**, **I. Almeida**, **M. Queiroz**. *SQL: From Traditional Databases to Big Data*. The 47th ACM Technical Symposium on Computer Science Education (SIGCSE), Tennessee, USA, 2016.
- **Y. N. Silva**, **J. Chon**. *DBSnap: Learning Database Queries by Snapping Blocks*. The 46th ACM Technical Symposium on Computer Science Education (SIGCSE), Missouri, USA, 2015. Paper presentation. Presented with J. Chon.
- **Y. N. Silva**, **J. Chon**. *Querying Databases by Snapping Blocks*. The 31st IEEE International Conference on Data Engineering (ICDE), Seoul, Korea, 2015. System demonstration.
- **S. Pearson**, **Y. N. Silva**. *Index-based R-S Similarity Joins*. The 7th International Conference on Similarity Search and Applications (SISAP), Los Cabos, Mexico, 2014. Paper presentation. Presented with S. Pearson.
- **Y. N. Silva**, S. W. Dietrich, J. M. Reed, **L. M. Tsosie**. *Integrating Big Data into the Computing*

Curricula. The 45th ACM Technical Symposium on Computer Science Education (**SIGCSE**), Atlanta, USA, 2014. Paper presentation.

- **Y. N. Silva, S. Pearson, J. A. Cheney**. *Database Similarity Join for Metric Spaces*. The 6th International Conference on Similarity Search and Applications (**SISAP**), A Coruña, Spain, 2013. Paper presentation. Presented with S. Pearson.
- **Y. N. Silva, S. Pearson**. *Exploiting Database Similarity Joins for Metric Spaces*. The 38th International Conference on Very Large Databases (**VLDB**), Istanbul, Turkey, 2012. System demonstration. Presented with S. Pearson.
- **Y. N. Silva, J. M. Reed, L. M. Tsosie**. *MapReduce-based Similarity Join for Metric Spaces*. The VLDB International Workshop on Cloud Intelligence (**VLDB/Cloud-I**), Istanbul, Turkey, 2012. Paper presentation. Presented with J. Reed.
- **Y. N. Silva, J. M. Reed**. *Exploiting MapReduce-based Similarity Joins*. The 2012 ACM SIGMOD International Conference on management of data (**SIGMOD**), Scottsdale, USA, 2012. System demonstration. Presented with J. Reed.
- **Y. N. Silva, P. -A. Larson, J. Zhou**. *Exploiting Common Sub-expressions for Cloud Query Processing*. The 28th International Conference on Data Engineering (**ICDE**), Washington, DC, USA, 2012. Paper and poster presentation.
- **Y. N. Silva, W. G. Aref, M. Ali**. *The Similarity Join Database Operator*. The 26th International Conference on Data Engineering (**ICDE**), Los Angeles, USA, 2010. Paper and poster presentation.
- **Y. N. Silva, A. M. Aly, W. G. Aref, P. -A. Larson**. *SimDB: A Similarity-aware Database System*. The 2010 ACM SIGMOD International Conference on Management of Data (**SIGMOD**), Indianapolis, USA, 2010. System demonstration.
- **Y. N. Silva, W. G. Aref, M. Ali**. *Similarity Group-by*. The 25th International Conference on Data Engineering (**ICDE**), China, 2009. Paper and poster presentation.
- **Y. N. Silva, W. G. Aref**. *Similarity-aware Query Processing and Optimization*. **VLDB PhD Workshop**, France, 2009. Paper presentation.
- **J. Padma, Y. N. Silva, M. Arshad, W. G. Aref**. *Hippocratic PostgreSQL*. The 25th International Conference on Data Engineering (**ICDE**), China, 2009. System demonstration. Presented with J. Padma and W. G. Aref.
- **M. Eltabakh, M. Ouzzani, W. G. Aref, A. Elmagarmid, Y. N. Silva, D. Salt, I. Baxter**. *Managing Biological Data using dbdms*. The 24th International Conference on Data Engineering (**ICDE**), México, 2008. System demonstration. Presented with M. Eltabakh and W. G. Aref.

Other Research Presentations

- **Y. N. Silva, J. M. Reed**. *Cloud Similarity Join for Multi-Dimensional Data*. **ASU-New College Spring Expo**, Arizona State University, Arizona, USA, 2011.
- **Y. N. Silva, S. Pearson**. *Similarity Join Database Operator for Multi-Dimensional Data*. **ASU-New College Spring Expo**, Arizona State University, Arizona, USA, 2011.
- **Y. N. Silva**. *SimDB: A Similarity-aware Database System*. **ASU-NCIAS Academic EXPO**, Arizona State University, Arizona, USA, 2010.
- **Y. N. Silva and W. G. Aref**. *SimDB: A Similarity-aware Database System*. **Computer Science Student Research Showcase**, Purdue University, Indiana, USA, 2009.
- **Y. N. Silva, P. -A. Larson, J. Zhou**. *Exploiting Common Sub-expressions for Cloud Query Processing*. **Microsoft Research Intern Presentation**, Washington, USA, 2009.
- **Y. N. Silva, S. Tata, and G. Lohman**. *Self-Organizing databases*. **IBM Almaden Research Center Intern Showcase**, California, USA, 2008.
- **Y. N. Silva, W. G. Aref, M. Ali**. *Similarity group-By*. **The 5th Midwest Database Research**

Symposium, Chicago, 2008.

- J. Padma, **Y. N. Silva**, M. Arshad, W. G. Aref. *Hippocratic PostgreSQL*. **The 5th Midwest Database Research Symposium**, Chicago, USA, 2008.
- **Y. N. Silva** and W. G. Aref. *Realizing Privacy-Preserving Features in Hippocratic Databases*. **CERIAS Information Security Symposium**, Indiana, USA, 2007.

Grants (External)

- **Y. N. Silva (PI)**, D. Hall (Co-PI), Huan Liu (Co-PI). *SaTC: CORE: Interdisciplinary Models to Identify and Understand Cyberbullying*. **National Science Foundation** - Computer and Network Systems/Secure and Trustworthy Cyberspace (CNS/SaTC) [NSF 19-603], Total: \$515,999.00 [40%: \$206,399.6 (Silva); 35%: \$180,599.65 (Hall); 25%: \$128,999.75 (Liu)], January 2021 - December 2023.
- R. Maciejewski (PI). *Center of Excellence for Accelerating Operational Efficiency (CAOE) - Year 4*. **Department of Homeland Security**, \$3,715,000.00, July 2020 - June 2021. Role: **Y. N. Silva** (Co-Investigator, 2%: \$74,300.00).
Project Title: *Toward Privacy-aware, High-utility, and Transparent Face Recognition*.
Project Budget: \$212,552.25
Project Investigators: M. Mancenido (Project PI), **Y. N. Silva** (Project Co-PI).
- **Y. N. Silva (PI)**. *A Diversity-aware Similarity Join Operator for Big Data*. **Google Cloud Platform Research Grant**, \$5,000.00 (cloud-based computing and storage resources), March 2020 - March 2021.
- R. Maciejewski (PI). *Center of Excellence for Accelerating Operational Efficiency (CAOE) - Year 3*. **Department of Homeland Security**, \$4,171,000.00, July 2019 - June 2020. Role: **Y. N. Silva** (Co-PI, 1%: \$41,710.00).
Project Title: *Development of a Static and Dynamic Algorithmic Auditing Methodology for Evaluating the Algorithmic Fairness of Smart Biometric Technologies*
Project Budget: \$150,252.00
Project Investigators: M. Mancenido (Project PI), **Y. N. Silva** (Project Co-PI).
- **Y. N. Silva (PI)**. *Similarity Grouping for Big Data Analysis*. **Google Cloud Platform Research Grant**, \$5,000.00 (cloud-based computing and storage resources), July 2018 - July 2019.
- T. Sandrin (PI). *Collaborative Research: TRAIN (TRAnsfer to Interdisciplinary Natural sciences) – Resubmission I*. **National Science Foundation** - Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM), \$2,065,516.00, January 2018 - January 2023. Role: **Y. N. Silva** (Investigator, 3%: \$62,568.45).
- **Y. N. Silva (PI)**, D. Hall (Co-PI). *EAGER: BullyBlocker – Identifying Cyberbullying in Social Networking Sites*. **National Science Foundation** - Computer and Network Systems/Secure and Trustworthy Cyberspace (CNS/SaTC) [NSF 17-019], Total: \$299,974.00 [60%: \$179,984.40 (Silva); 40%: \$119,989.60 (Hall)], September 2017 - August 2020.
- **Y. N. Silva (PI)**. *Similarity Grouping for Big Data (Part II)*. **Amazon Research Grants Program**, \$3,300.00 (cloud-based computing and storage resources), April 2017 - April 2018.
- **Y. N. Silva (PI)**. *Similarity Grouping for Big Data*. **Amazon Research Grants Program**, \$4,000.00 (cloud-based computing and storage resources), April 2015 - April 2017.
- **Y. N. Silva (PI)**. *Integrating Big Data Technologies into the Applied Computing Curricula*. **Amazon Educational Grants Program**, \$4,500.00 (cloud-based computing and storage resources to be used in two Applied Computing courses), January 2015 - January 2016.
- **Y. N. Silva (PI)**. *BullyBlocker: Keep Your Child Safe from Cyberbullies on Facebook*. **ASU Foundation** (Crowdfunding Program), \$3,471.00, January 2014 - January 2016.
- **Y. N. Silva (PI)**. *Similarity Join Operators for Cloud Systems*. **Amazon Research Grants Program**, \$10,000.00 (cloud-based computing and storage resources), November 2012 - August

2015.

- **Y. N. Silva (PI).** *Integrating Highly Distributed Technologies into the Applied Computing Curricula. Amazon Educational Grants Program*, \$4,500.00 (cloud-based computing and storage resources to be used in two Applied Computing courses), March 2013 - March 2014.

Grants (Internal)

- **Y. N. Silva (PI)**, Deborah Hall (Co-PI). *Investigating Patterns of Anti-Asian Racism on Twitter During Covid-19*. The NCUIRE Racial Justice Program. \$1,000.00 (student stipend), August 2020 - December 2020.
- **Y. N. Silva (PI).** *Reporting the Results of Evaluating Similarity Grouping Algorithms*. Western Alliance to Expand Student Opportunities (WAESO), \$3,300.00 (student stipend and supplies – 3 students), January - May 2019.
- **Y. N. Silva (PI).** *Privacy-preserving Cyberbullying Detection*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$500.00 (student scholarship credits and supplies), August 2018 - May 2019.
- **Y. N. Silva (PI).** *Experimental Evaluation of Similarity Grouping Algorithms*. Western Alliance to Expand Student Opportunities (WAESO), \$3,300.00 (student stipend and supplies – 3 students), August - December 2018.
- **Y. N. Silva (PI).** *Evaluating the Types and Frequencies of Students' Mistakes in Specifying Database Queries using Block-based Environments*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$500.00 (student scholarship credits and supplies), August - December 2018.
- **Y. N. Silva (PI).** *Similarity Grouping for Big Data*. Western Alliance to Expand Student Opportunities (WAESO), \$4,300.00 (student stipend and supplies – 4 students), May - August 2018.
- **Y. N. Silva (PI).** *A Compact Similarity Join Operation for Big Data*. Western Alliance to Expand Student Opportunities (WAESO), \$1,300.00 (student stipend and supplies), August - December 2017.
- **Y. N. Silva (PI).** *BullyBlocker 2.0 – Evaluating and Enhancing the Accuracy of Cyberbullying Identification*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,000.00 (student scholarship stipend and supplies), August 2017 - May 2018.
- **Y. N. Silva (PI).** *Development and evaluation of Feedback Mechanisms for the BullyBlocker App*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$500.00 (student scholarship credits and supplies), August 2017 - May 2018.
- **Y. N. Silva (PI).** *DBSnap2 – Building Complete Database Programs by Snapping Blocks*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,500.00 (student fellowship stipend and supplies), August 2016 - May 2017.
- **Y. N. Silva (PI).** *Automated Identification of Cyberbullying in Social Networks*. The Dion Initiative for Child Well-Being and Bullying Prevention, \$10,000.00 (student stipends, supplies, and conference travel), January 2015 - January 2018.
- **Y. N. Silva (PI).** *BullyBlocker: Identifying Cyberbullying in Facebook*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,000.00 (student scholarship stipend and supplies), August 2015 - May 2016.
- **Y. N. Silva (PI).** *Study, Classification and Benchmarking of Similarity Join Algorithms for Big Data*. Scholarship, Research and Creative Activities Grant (SRCA), New College of Interdisciplinary Arts and Sciences, Arizona State University, \$4,999.00 (faculty summer salary), July - December 2015.
- **Y. N. Silva (PI).** *Similarity Grouping for Big Data*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,500.00 (student fellowship stipend and supplies),

May - August 2015.

- **Y. N. Silva (PI).** *DB Snap: Building Database Queries by Snapping Blocks*. Western Alliance to Expand Student Opportunities (WAESO), \$1,300.00 (student stipend and supplies), August - December 2014.
- **Y. N. Silva (PI).** *DB Snap! – Learning Database Languages by Snapping Blocks*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,000.00 (student scholarship stipend and supplies), May - August 2014.
- **Y. N. Silva (PI).** *M-SimJoin: Efficient Multi-predicate Similarity Joins*. Western Alliance to Expand Student Opportunities (WAESO), \$1,300.00 (student stipend and supplies), January - May 2014.
- **Y. N. Silva (PI).** *High-performance Similarity Join Database Operators for Metric Spaces*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,500.00 (student fellowship stipend and supplies), August 2012 - May 2013.
- **Y. N. Silva (PI).** *FaceBully: Identifying Cyberbullying Behavior in Facebook*. Western Alliance to Expand Student Opportunities (WAESO), \$2,100.00 (student stipend and supplies), January - May 2013.
- **Y. N. Silva (PI).** *Study, Evaluation and Comparison of Similarity-aware Algorithms for Clouds Systems*. Western Alliance to Expand Student Opportunities (WAESO), \$2,100.00 (student stipend and supplies), September - December 2012.
- **Y. N. Silva (PI).** *Similarity Join Database Operators for Multidimensional Data*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$2,750.00 (student scholarship stipend and supplies), August 2011 - May 2012.
- **Y. N. Silva (PI).** *Similarity Joins for Cloud Computing Infrastructure*. The New College Undergraduate Inquiry & Research Experiences (NCUIRE) Program, \$3,000.00 (student scholarship stipend and supplies), January - December 2011.

Collaborative Research Agreements

- HP Labs - Arizona State University. **Y. N. Silva**, R. Vernica. *MapReduce-based Parallel Face Clustering*. January 2013 - December 2013.

Courses Taught and Teaching Evaluation Scores

- **Fall 2020: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.4/5.0 (response/enrolled: 67/87).
- **Fall 2020: ACO 598/ACO 423 – Data Science.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 15/18).
- **Spring 2020: ACO 101 – Introduction to Computer Science.** Overall performance score in teaching evaluation: 4.6/5.0 (response/enrolled: 16/30).
- **Spring 2020: ACO 420 – Big Data Systems.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 22/23).
- **Fall 2019: ACO 432 – Distributed Systems.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 10/10).
- **Fall 2019: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 46/56).
- **Spring 2019: ACO 420 – Big Data Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 11/12).
- **Spring 2019: ACO 350 – Systems Programming.** Overall performance score in teaching evaluation: 4.8/5.0 (response/enrolled: 32/36).
- **Fall 2018: ACO 320 – Database Systems.** Overall performance score in teaching evaluation:

- 4.9/5.0 (response/enrolled: 14/15).
- **Fall 2018: ACO 101 – Introduction to Computer Science.** Overall performance score in teaching evaluation: 4.7/5.0 (response/enrolled: 23/28).
 - **Spring 2018: ACO 420 – Big Data Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 17/18).
 - **Spring 2018: ACO 101 – Introduction to Computer Science.** Overall performance score in teaching evaluation: 4.7/5.0 (response/enrolled: 18/22).
 - **Fall 2017: ACO 320 – Database Systems.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 16/20).
 - **Fall 2017: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 14/15).
 - **Spring 2017: ACO 432 – Distributed Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 21/21).
 - **Spring 2017: ACO 350 – Systems Programming.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 8/8).
 - **Spring 2016: ACO 420 – Large-scale Data Management.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 15/17).
 - **Spring 2016: ACO 210 – Introduction to Systems Programming.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 21/22).
 - **Fall 2015: ACO 320 – Database Systems.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 20/22).
 - **Fall 2015: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.8/5.0 (response/enrolled: 19/23).
 - **Spring 2015: ACO 432 – Distributed Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 18/19).
 - **Spring 2015: ACO 420 – Large-scale Data Management.** Overall performance score in teaching evaluation: 4.9/5.0 (response/enrolled: 10/11).
 - **Fall 2013: ACO 432 – Distributed Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 11/11).
 - **Fall 2013: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 25/27).
 - **Spring 2013: ACO 420 – Object Databases.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 4/4).
 - **Spring 2013: ACO 210 – Introduction to Systems Programming.** Overall performance score in teaching evaluation: 4.9/5.00 (response/enrolled: 21/23).
 - **Fall 2012: ACO 432 – Distributed Systems.** Overall performance score in teaching evaluation: 4.6/5.0 (response/enrolled: 10/11).
 - **Fall 2012: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.8/5.0 (response/enrolled: 22/28).
 - **Spring 2012: ACO 420 – Object Databases.** Teaching evaluation data not available due to class size.
 - **Spring 2012: ACO 220 – Introduction to Database Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 18/19).
 - **Fall 2011: ACO 432 – Distributed Systems.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 10/12).

- **Fall 2011: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.8/5.0 (response/enrolled: 16/19).
- **Spring 2011: ACO 420 – Object Databases.** Overall performance score in teaching evaluation: 5.0/5.0 (response/enrolled: 3/3).
- **Spring 2011: ACO 210 – Introduction to Systems Programming.** Overall performance score in teaching evaluation: 4.8/5.0 (response/enrolled: 16/17).
- **Fall 2010: ACO 201 – Data Structures & Algorithms.** Overall performance score in teaching evaluation: 4.42/5.0 (response/enrolled: 20/25).

Mentoring

Undergraduate Students

- **Grace Powell (ASU Undergraduate Student, BS in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Grace participated in the project in Spring 2021. January 2021 - Present.
- **Christie Djidjev (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. I mentored this student under Supervised Research (ACO 399) credits in Fall 2020. August 2020 - Present.
- **Hailyn Valle (ASU Undergraduate Student, female, underrepresented, first-generation college student).** Research projects: *Learning Tools for Data Science* and *Identifying Cyberbullying in Social Networking Sites*. I mentored this student in the first project under Individualized Instruction (ACO 499) credits in Summer 2020, and in the second project under Individualized Instruction (ACO 499) credits and a New College Undergraduate Inquiry and Research Experiences (NCUIRE) team award in Fall 2020. May 2020 - December 2020.
- **Logan Beermann (ASU Undergraduate Student).** Research project: *Similarity-aware Operators for Big Data*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2020. January 2020 - May 2020.
- **Caitlyn Huff (ASU Undergraduate Student, female).** Research project: *Similarity-aware Operators for Big Data*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2020. January 2020 - May 2020.
- **Paige Diana (ASU Undergraduate Student, female).** Research project: *Similarity-aware Operators for Big Data*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2020. January 2020 - May 2020.
- **Jarom Montgomery (ASU Undergraduate Student, underrepresented).** Research project: *Block-based systems for Building Database Queries*. I mentored this student under Supervised Research (ACO 399) credits in Spring/Fall 2020. January 2020 - December 2020.
- **Benjamin McLemore (ASU Undergraduate Student).** Research project: *Block-based systems for Building Database Queries*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2020. January 2020 - May 2020.
- **Heather Flynn (ASU Undergraduate Student, female).** Research projects: *Block-based systems for Building Database Queries* and *Learning Tools for Data Science*. I mentored this student in the first project under Supervised Research (ACO 399) credits in Spring/Fall 2020 and in the second project under Supervised Research (ACO 399) credits in Summer 2020. January 2020 - Present.
- **Daniel Foglesong (ASU Undergraduate Student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. I mentored this student under Supervised Research (ACO 399) credits in Spring/Fall 2020. January 2020 - Present.
- **Timothy Raymer (ASU Undergraduate Student).** Research project: *Similarity-aware Operators for Big Data*. I mentored this student under Supervised Research (ACO 399) credits in

Fall 2019, Individualized Instruction (ACO 499) credits in Spring/Fall 2020 and as a volunteer in Summer 2020. August 2019 - December 2020.

- **Victor Garcia (ASU Undergraduate Student, underrepresented, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Victor participated in the project as a volunteer in Fall 2019 and Summer 2020, under Supervised Research (ACO 399) credits in Spring 2020, under Individualized Instruction (ACO 499) credits in Fall 2020, and under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) team award in Fall 2020. August 2019 - Present.
- **Lawson Rubi (ASU Undergraduate Student).** Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. Lawson participated in the project as a volunteer in Fall 2019. August 2019 - December 2019.
- **Giovanni Artiglio (ASU Undergraduate Student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Giovanni participated in the project as a volunteer in Spring 2019 and under Supervised Research (ACO 399) credits in Fall 2019 and Spring/Fall 2020. January 2019 - Present.
- **Maggie Lorenz (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Maggie participated in the project as a volunteer in Spring/Summer/Fall 2019 and Summer 2020, under Supervised Research (ACO 399) credits in Spring 2020, and Honors Directed Study (ACO 492) credits in Fall 2020. January 2019 - Present.
- **Michael Barden (ASU Undergraduate Student).** Research project: *Block-based systems for Building Database Queries*. Michael participated in the project as a volunteer in Spring/Fall 2019 and under Supervised Research (ACO 399) credits in Spring/Fall 2020. January 2019 - Present.
- **Isabel Hankes (ASU Undergraduate Student, female).** Research project: *Block-based systems for Building Database Queries*. Isabel participated in the project as a volunteer in Spring 2019. January 2019 - December 2019.
- **Shunbo Hu (ASU Undergraduate Student).** Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. Shunbo participated in the project as a volunteer in Spring/Fall 2019 and under Individualized Instruction (ACO 499) credits in Fall 2020. January 2019 - Present.
- **Kartik Gupta (ASU Undergraduate Student).** Research project: *MapReduce-based Similarity Joins*. Kartik participated in the project as a volunteer in Spring 2019 and under a Grand Challenges Scholars Program award in Fall 2019. January 2019 - December 2019.
- **Ryan Kingsbury (ASU Undergraduate Student).** Research project: *Evaluating Block-based systems for Building Database Queries*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2019 and Individualized Instruction (ACO 499) credits in Fall 2019. January 2019 - December 2019.
- **Siddharth Kothari (ASU Undergraduate Student).** Research project: *Evaluating Block-based systems for Building Database Queries*. I mentored this student under Individualized Instruction (ACO 499) credits in Spring/Fall 2019. January 2019 - December 2019.
- **Nathalie Alejandro (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Nathalie worked on this project under a paid research assistant position in Spring 2019 and Summer 2019. January - August 2019.
- **Jason Kloberdanz (ASU Undergraduate Student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Jason participated in the project as a volunteer in Fall 2018. August 2018 - December 2018.
- **Alexis Loza (ASU Undergraduate Student, underrepresented, first-generation college student).** Research project: *Evaluating Block-based systems for Building Database Queries*. I

mentored this student under Supervised Research (ACO 399) credits in Fall 2018 and Spring 2019, under Individualized Instruction (ACO 499) credits in Fall 2019 and Spring 2020, and as a volunteer in Summer 2020. August 2018 - August 2020.

- **Austin Stark (ASU Undergraduate Student).** Research project: *Evaluating Block-based systems for Building Database Queries*. I mentored this student under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award for academic credit (ACO 499, Fall 2018). August 2018 - December 2018.
- **Diana Prado (ASU Undergraduate Student, female, underrepresented, first-generation college student).** Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2018, Western Alliance to Expand Student Opportunities (WAESO) awards in Summer 2018, Fall 2018 and Spring 2019, a New College Undergraduate Inquiry and Research Experiences (NCUIRE) team award for academic credit (ACO 399, Fall 2018), and Individualized Instruction (ACO 499) credits in Spring/Fall 2019. January 2018 - December 2019.
- **Manuel Sandoval Madrigal (ASU Undergraduate Student, underrepresented, first-generation college student).** Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2018, Western Alliance to Expand Student Opportunities (WAESO) awards in Summer 2018, Fall 2018 and Spring 2019, a New College Undergraduate Inquiry and Research Experiences (NCUIRE) team award for academic credit (ACO 399, Fall 2018), and Individualized Instruction (MAT 499) credits in Spring 2019. January 2018 - May 2019.
- **Xavier Wallace (ASU Undergraduate Student, underrepresented).** Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2018, Western Alliance to Expand Student Opportunities (WAESO) awards in Summer 2018, Fall 2018 and Spring 2019, a New College Undergraduate Inquiry and Research Experiences (NCUIRE) team award for academic credit (ACO 399, Fall 2018), Individualized Instruction (ACO 499) credits in Spring/Fall 2019, and under Honors Directed Study (Honors Thesis) in Spring/Fall 2019. January 2018 - Dec. 2019.
- **Timothy Strom (ASU Undergraduate Student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2018, a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award for academic credit (ACO 399 in Fall 2018 and ACO 499 in Spring 2019), and Individualized Instruction (ACO 499) credits in Fall 2019. January 2018 - December 2019.
- **John Spokes (ASU Undergraduate Student, underrepresented, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. I mentored this student under Supervised Research (ACO 399) credits in Spring/Fall 2018, and Individualized Instruction (ACO 499) credits in Spring/Fall 2019. January 2018 - December 2019.
- **Tamara Juntiff (ASU Undergraduate Student, female).** Research project: *Evaluating Block-based systems for Building Database Queries*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2018. January 2018 - May 2018.
- **Adan Melendez (ASU Undergraduate Student, underrepresented, first-generation college student).** Research project: *Evaluating Block-based systems for Building Database Queries*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2018. January 2018 - March 2018.
- **Carmen Sanchez (ASU Undergraduate Student, female, underrepresented).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Carmen worked on this project under a paid research assistant position. September 2017 - December 2018.
- **Victoria Delgadillo (ASU Undergraduate Student, female, underrepresented).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Victoria worked on this project under a paid research assistant position. September 2017 - May 2018.

- **Rusty Conway (ASU Undergraduate Student, first-generation college student).** Research

project: *Identifying Cyberbullying in Social Networking Sites*. Rusty worked on this project under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award (Fall 2017-Spring 2018) and a paid research assistant position in Spring 2018. August 2017 - May 2018.

- **Emerson Cristal (ASU Undergraduate Student, underrepresented, first-generation college student)**. Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Supervised Research (ACO 399) credits in Fall 2017, under Individualized Instruction (ACO 499) credits in Spring 2018, and under a Western Alliance to Expand Student Opportunities (WAESO) award in Summer 2018. August 2017 - August 2018.
- **Jeremy Starks (ASU Undergraduate Student)**. Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Individualized Instruction (ACO 499) credits in Spring 2017 and Fall 2017, and under a Western Alliance to Expand Student Opportunities (WAESO) award (Fall 2017). Jeremy continued collaborating in my research team after graduation (Fall 2017). January 2017 - May 2018.
- **Chance Brown (ASU Undergraduate Student)**. Research project: *Identifying Cyberbullying in Facebook*. I mentored this student under Individualized Instruction (ACO 499) credits in Fall 2016 and Spring 2017. August 2016 - May 2017.
- **Thomas Schenk (ASU Undergraduate Student, first-generation college student)**. Research projects: *Integrating DBSnap and Snap* and *Identifying Cyberbullying in Social Networking Sites*. I mentored this student in the first project under Supervised Research (ACO 399) credits in Fall 2016 and Spring 2017, and in the second project under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award for academic credit (ACO 499, Fall 2017-Spring 2018) and a paid research assistant position in Spring 2018. August 2016 - May 2018.
- **Anton Debruyn (ASU Undergraduate Student, underrepresented, first-generation college student)**. Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Individualized Instruction (ACO 499) credits in Fall 2016. August 2016 - December 2016.
- **Bryan Sawkins (ASU Undergraduate Student, underrepresented)**. Research project: *Identifying Cyberbullying in Social Networking Sites*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2016 and Fall 2016, and under Individualized Instruction (ACO 499) credits in Spring 2017 and Fall 2017. January 2016 - December 2017.
- **Guadalupe Garcia (ASU Undergraduate Student, female, underrepresented, first-generation college student)**. Research project: *Identifying Cyberbullying in Social Networking Sites*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2016 and Fall 2016, under Individualized Instruction (ACO 499) credits in Spring 2017 and Fall 2017, and under a paid research assistant position in Fall 2017. January 2016 - December 2017.
- **Anthony Van Nieuwenhuysse (ASU Undergraduate Student, underrepresented, first-generation college student)**. Research projects: *Integrating DBSnap and Snap* and *Identifying Cyberbullying in Social Networking Sites*. I mentored this student in the first project under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) fellowship award (Fall 2016-Spring 2017), Supervised Research (ACO 399) credits in Spring 2016 and Fall 2016, and Individualized Instruction (ACO 499) credits in Spring 2017. I mentored the student in the second project under Individualized Instruction (ACO 499) credits and a paid research assistant position in Fall 2017. January 2016 - December 2017.
- **Nathan Middlebrook (ASU Undergraduate Student)**. Research project: *MapReduce-based Similarity Grouping and Similarity Joins*. I mentored this student under Supervised Research (ACO 399) credits in Spring 2016 and Fall 2016, and under Individualized Instruction (ACO 499) credits in Spring 2017 and Fall 2017. January 2016 - December 2017.
- **Alaura Symons (ASU Undergraduate Student, female)**. Research project: *Integrating DBSnap and Snap* and *Evaluating Block-based systems for Building Database Queries*. I

mentored this student in the first project under Supervised Research (ACO 399) credits in Spring 2016, Fall 2016 and Spring 2017; and in the second project under Individualized Instruction (ACO 499) credits in Spring 2018. January 2016 - May 2018.

- **Adam Goldsmith (ASU Undergraduate Student).** Research projects: *Integrating DBSnap and Snap*. I mentored this student under Individualized Instruction (ACO 499) credits in Fall 2015 and Spring 2016. August 2015 - May 2016.
- **Kyle Brown (ASU Undergraduate Student, first-generation college student).** Research projects: *A Categorization and Comparison of MapReduce-based Similarity Join Algorithms* and *MapReduce-based Similarity Grouping*. I worked with this student under Individualized Instruction (ACO 499) credits in Fall 2015. I also mentored this student in Summer 2015. The student continued collaborating in my research team after graduation (December 2015). May 2015 - March 2016.
- **Andrew Cannella (ASU Undergraduate Student, first-generation college student).** Research project: *A Categorization and Comparison of MapReduce-based Similarity Join Algorithms*. I mentored this student under Individualized Instruction (ACO 499) credits in Summer 2015. May 2015 - August 2015.
- **Isadora Silva Almeida (International Exchange Visitor, Undergraduate Student, female).** Research project: *SQL in Relational, NoSQL and NewSQL Databases*. I mentored this student in Summer 2015. May 2015 - August 2015.
- **Pedro Cavalcanti Leite (International Exchange Visitor, Undergraduate Student).** Research project: *DBSnap: Learning Database Languages by Snapping Blocks*. I mentored this student in Summer 2015. May 2015 - August 2015.
- **Michell Fernandes Macedo Queiroz (International Exchange Visitor, Undergraduate Student).** Research project: *DBSnap: Learning Database Languages by Snapping Blocks*. I mentored this student in Summer 2015. May 2015 - August 2015.
- **Gohar Hunter (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Facebook*. I mentored this student under Individualized Instruction (ACO 499) credits in Spring 2015 and Fall 2015. January 2015 - December 2015.
- **Adelbert Wadsworth (ASU Undergraduate Student, first-generation college student).** Research projects: *MapReduce-based Similarity Grouping* and *A Categorization and Comparison of MapReduce-based Similarity Join Algorithms*. Adelbert worked on these projects under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) fellowship award (Summer 2015). I also mentored this student under Individualized Instruction (ACO 499) credits in Spring 2015 and Fall 2015. The student continued collaborating in my research team after graduation (December 2015). January 2015 - March 2016.
- **Christopher Rich (ASU Undergraduate Student).** Research project: *Identifying Cyberbullying in Facebook*. Christopher worked on this project under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award (Fall 2015-Spring 2016). I also mentored this student in Summer 2014 (volunteer), Summer 2015 (paid research assistant position), and under Supervised Research credits in Fall 2014 (ACO 394), Spring 2015 (ACO 399), Fall 2015 (ACO 499), and Spring 2016 (ACO 499). May 2014 - May 2016.
- **Jaime Chon (ASU Undergraduate Student, underrepresented).** Research projects: *Multi-predicate Similarity Join Operators*, *DBSnap: Learning Database Languages by Snapping Blocks*, and *Identifying Cyberbullying in Facebook*. Jaime worked on the first project under a Western Alliance to Expand Student Opportunities (WAESO) award (Spring 2014), and on the second project under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award (Summer 2014) and a WAESO award (Fall 2014). I also worked with this student on the third project under Individualized Instruction (ACO 499) credits in Spring 2015. October 2013 - May 2015.
- **Kyle Gervais (ASU Undergraduate Student).** Research project: *MapReduce-based Similarity Grouping*. I worked with this student under Individualized Instruction (ACO 499) credits in

Spring 2014 and Spring 2015, and under Supervised Research (ACO 394) credits in Fall 2014. I also mentored this student in Summer 2014. October 2013 - May 2015.

- **Tara Tucker (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Facebook*. I worked with this student under Individualized Instruction (ACO 499) credits in Fall 2013 and Spring 2014. The student continued collaborating in my research team after graduation (May 2014). August 2013 - June 2014.
- **Ryan Roberts (ASU Undergraduate Student).** Research project: *Multi-predicate Similarity Join Operators*. I worked with this student under Individualized Instruction (ACO 499) credits in Fall 2013 and Spring 2014. March 2013 - May 2014.
- **Kathleen Currie (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Facebook*. January 2013 - April 2013.
- **Timothy Matti (ASU Undergraduate Student).** Research project: *Study, Evaluation and Comparison of Similarity-aware Algorithms for Cloud Systems*. I worked with this student under Individualized Instruction (ACO 499) credits in Spring 2013, Fall 2013 and Spring 2014. October 2012 - May 2014.
- **Shea Wall (ASU Undergraduate Student, female).** Research project: *Identifying Cyberbullying in Facebook*. October 2012 - December 2012.
- **Lisa M. Tsosie (ASU Undergraduate Student, female, underrepresented).** Research projects: *Identifying Cyberbullying in Facebook* and *Study, Evaluation and Comparison of Similarity-aware Algorithms for Cloud Systems*. Lisa worked on these projects under Western Alliance to Expand Student Opportunities (WAESO) awards in Spring 2013 and Fall 2012, respectively. I mentored this student in Summer 2013 and Summer 2014, and under Individualized Instruction (ACO 499) credits in Summer 2012, Fall 2012, Fall 2013, Spring 2014 and Fall 2014. April 2012 - December 2014.
- **Jason A. Cheney (ASU Undergraduate Student, underrepresented).** Research projects: *Similarity Join Database Operators for Metric Spaces* and *Identifying Cyberbullying in Facebook*. I mentored this student on the first project in Summer of 2012 and on the second project under Individualized Instruction (ACO 499) credits in Spring 2014. The student continued collaborating in my research team after graduation (May 2014). April 2012 - August 2012, January 2014 - July 2014.
- **Spencer Pearson (ASU Undergraduate Student).** Research project: *Similarity Join Database Operators for Metric Spaces*. Spencer worked on this project under two New College Undergraduate Inquiry and Research Experiences (NCUIRE) awards (scholarship award in Fall 2011-Spring 2012 and fellowship award in Fall 2012-Spring 2013). I also worked with this student in the summer months of 2011, 2012 and 2013; under Individualized Instruction (ACO 499) credits in Spring 2011; and under Honors Directed Study (Honors Thesis) in Fall 2013 and Spring 2014. The student continued collaborating in my research team after graduation (May 2014). December 2010 - August 2015.
- **Jason M. Reed (ASU Undergraduate Student).** Research project: *Similarity Joins for Cloud Computing Infrastructure*. Jason worked on this project under a New College Undergraduate Inquiry and Research Experiences (NCUIRE) scholarship award (Spring 2011-Fall 2011). I also worked with this student in Summer 2011 and Summer 2012; and under Individualized Instruction (ACO 499) credits in Spring 2012 and Fall 2012. The student continued collaborating in my research team after graduation (December 2012). October 2010 - December 2016.

Graduate Students

- **Johnny Hudson (ASU Graduate Student, MS in Psychology, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Johnny participated in the project in Fall 2020 and Spring 2021. August 2020 - Present.
- **Mara Hamlett (ASU Graduate Student, MS in Psychology, underrepresented).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Mara participated in the project in

Summer/Fall 2020 and Spring 2021. May 2020 - Present.

- **David Mosallanezhad (ASU Graduate Student, PhD in Computer Science).** Research project: *Algorithmic Fairness for Smart Biometric Technologies*. David participated in the project under a paid research assistant position in Fall 2019, and Spring/Summer 2020 and as a volunteer in Fall 2020. August 2019 - Present.
- **Harshil Champaneria (ASU Graduate Student, MS in Industrial Engineering).** Research project: *Algorithmic Fairness for Smart Biometric Technologies*. Harshil participated in the project under a paid research assistant position in Fall 2019 and Spring 2020, and as a volunteer in Summer 2020. August 2019 - August 2020.
- **Rajashekar Reddy Aluka (ASU Graduate Student, MS in Computer Science, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Rajashekar participated in the project under a paid research assistant position in Summer 2020. May 2020 - August 2020.
- **Aabhaas Gupta (ASU Graduate Student, MS in Computer Science).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Aabhaas participated in the project under a paid research assistant position in Summer 2019 and as a volunteer in Fall 2019 and Spring 2020. May 2019 - May 2020.
- **Kathleen Baumel (ASU Graduate Student, MS in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Katie participated in the project in Fall 2019, Spring/Summer/Fall 2020, and Spring 2021. August 2019 - Present.
- **Brittany Wheeler (ASU Graduate Student, MS in Psychology, female, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Brittany participated in the project in Fall 2019, Spring/Summer/Fall 2020, and Spring 2021. August 2019 - Present.
- **Selena Quiroz (ASU Graduate Student, PhD in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Selena participated in the project under a paid research assistant position in Summer 2019/Summer 2020 and as a volunteer in Fall 2019, Spring/Fall 2020, and Spring 2021. May 2019 - Present.
- **Xingyu Liu (ASU Graduate Student, MS in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Xingyu participated in the project under a paid research assistant position in Spring/Summer 2019 and as a volunteer in Fall 2019, Spring/Summer/Fall 2020, and Spring 2021. January 2019 - Present.
- **Divya Prakash Sivakumar (ASU Graduate Student, MS in Computer Science).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Divya participated in the project under a paid research assistant position. August 2018 - May 2019.
- **Prachi Solanki (ASU Graduate Student, MS in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Prachi participated in the project under a paid research assistant position in Fall 2018 and as a volunteer in Spring 2019. August 2018 - May 2019.
- **Hayley Seeley (ASU Graduate Student, MS in Psychology, female, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Hayley participated in the project as a volunteer in Summer 2018, Fall 2018 and Spring 2019. June 2018 - May 2019.
- **Stephanie Thibault (ASU Graduate Student, MS in Psychology, female, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Stephanie participated in the project as a volunteer in Summer 2018, Fall 2018 and Spring 2019. June 2018 - May 2019.
- **Yash Belorkar (ASU Graduate Student, MS in Computer Science).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Yash participated in the project under a paid research assistant position. May 2018 - May 2019.

- **Kaitlyn Schodt (ASU Graduate Student, MS in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Kaitlyn participated in the project under a paid research assistant position in Summer 2018 and as a volunteer in Fall 2018, Spring/Summer 2019, and Fall 2020. May 2018 - December 2020.
- **Wenxi Yang (ASU Graduate Student, MS in Psychology, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Wenxi participated in the project as a volunteer in Summer/Fall 2018, and Spring/Summer/Fall 2019. May 2018 - December 2019.
- **Chun Shao (ASU Graduate Student, PhD in Journalism and Mass Communication).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Chun participated in the project under a paid research assistant position in Spring 2018, Summer 2018 and fall 2018, and as a volunteer in Spring/Summer 2019. January 2018 - August 2019.
- **Lu Chen (ASU Graduate Student, PhD in Computer Science, female).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Lu participated in the project under a paid research assistant position from Fall 2017 to Fall 2019 and in Fall 2020, and as a volunteer in Spring/Summer 2020. September 2017 - Present.
- **Premysl Cech (Visiting Graduate Student, Charles University, Czech Republic, PhD in Computer Science).** Research project: *kNN Similarity Joins for Big Data*. Premysl visited ASU in Fall 2017 and continued collaborating in my research team after his visit. September 2017 - May 2018.
- **Ayush Sanyal (ASU Graduate Student, MS in Computer Science).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Ayush participated in the project under a paid research assistant position. September 2017 - May 2018.
- **Ashley Trow (ASU Graduate Student, MS in Psychology, female, first-generation college student).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Ashley participated in the project under a paid research assistant position in Fall 2017 and as a volunteer in Spring 2018. September 2017 - May 2018.
- **Linle Jiang (ASU Graduate Student, MS in Psychology).** Research project: *Identifying Cyberbullying in Social Networking Sites*. I also served as a member of Linle's MS supervisory committee. September 2017 - May 2018.
- **Aakanxu Shah (ASU Graduate Student, MS in Computer Science).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Aakanxu participated in the project under a paid research assistant position. May 2015 - August 2015.
- **Mohan Thorat (ASU Graduate Student, MS in Computer Science).** Research project: *Identifying Cyberbullying in Social Networking Sites*. Mohan participated in the project under a paid research assistant position. January 2015 - May 2015.
- **Mithila Nagendra (ASU Graduate Student, PhD in Computer Science, female).** I was part of Mithila's PhD supervisory committee. November 2012 - August 2014.

Postdoctoral Scholars

- **Humberto Luiz Razente (Federal University of Uberlândia, Brazil - UFU, Computer Science).** Research projects: *Similarity-aware Operators for Big Data* and *Block-based systems for Building Database Queries*. Humberto joined my team under a grant from the CAPES Brazilian Foundation (Coordination for the Improvement of Higher Education Personnel) and with support from UFU. December 2019 - December 2020.
- **Maria Camila Nardini Barioni (Federal University of Uberlândia - UFU, Brazil, Computer Science).** Research projects: *Identifying Cyberbullying in Social Networking Sites*, *Investigating Patterns of Anti-Asian Racism on Twitter During Covid-19*, and *Similarity-aware Operators for Big Data*. Maria joined my team with support from UFU. December 2019 - December 2020.
- **Chuitian Rong (Tianjin Polytechnic University, China, Computer Science).** Research project: *Similarity Joins for Big Data*. Chuitian joined my team under a scholarship from the

Service

Professional Service

Proposal Reviewer Service

- Member of a National Science Foundation (NSF) review panel, 2012.
- Member of a National Science Foundation (NSF) review panel, 2010.

Conference Activities

- Co-chair of the technical program committee for the 11th International Conference on Similarity Search and Applications (SISAP), 2018.
- Technical program committee member for the 10th International Conference on Similarity Search and Applications (SISAP), 2017.
- Technical program committee member for the 32nd IEEE International Conference on Data Engineering (ICDE), 2016.
- Technical program committee member and session chair for the 9th International Conference on Similarity Search and Applications (SISAP), 2016.
- Technical program committee member for the Latin American Symposium on Innovative Data Systems (SLSID), 2015.
- Technical program committee member for the ACM SIGMOD International Conference on Management of Data (SIGMOD), demo track, 2015.
- Technical program committee member for the 8th International Conference on Similarity Search and Applications (SISAP), 2015.
- Technical program committee member for the IEEE International Conference on Big Data (BigData), 2014.
- Technical program committee member for the 7th International Conference on Similarity Search and Applications (SISAP), 2014.
- Technical program committee member for the ACM SIGMOD International Conference on Management of Data (SIGMOD), demo track, 2014.
- Technical program committee member for the 30th IEEE International Conference on Data Engineering (ICDE), demo track, 2014.
- Technical program committee member for the IEEE International Conference on Big Data (BigData), 2013.
- Technical program committee member for the ACM SIGMOD International Conference on Management of Data (SIGMOD), 2013.
- Technical program committee member for the 29th IEEE International Conference on Data Engineering (ICDE), 2013.
- Technical program committee member for the Alberto Mendelzon International Workshop on Foundations of Data Management (AMW), 2011.
- Technical program committee member for the Regional Congress of Systems and Computer Engineering Students (COREIS), Peru, 2011.
- Program booklet organizer of the VLDB '11 Conference, 2011.
- External reviewer for SIGMOD '06,'10, VLDB '09, ICDE '07-'10, EDBT '08-'09, GIS '07, WWW '08 and IWCTS '08.

Journal Referee Service

- Guess Editor of a special issue of the Information Systems journal for selected papers of SISAP 2018. May 2019 - February 2020.
- Editorial board member of the Journal of Information and Data Management (**JIDM**). January 2015 - December 2016.
- Editorial board member of the International Journal of Data Engineering (**IJDE**). January 2011 - March 2015.
- Reviewer for the **VLDB Journal**, 2020.
- Reviewer for the Social Network Analysis and Mining (**SNAM**) Journal, 2017.
- Reviewer for the IEEE Transactions on Knowledge and Data Engineering (**TKDE**) Journal, 2016.
- Reviewer for the ACM Transactions on Database Systems (**TODS**) Journal, 2016.
- Reviewer for International Journal of Distributed and Parallel Databases (**DAPD**), 2013.
- Reviewer for the ACM Transactions on Database Systems (**TODS**) Journal, 2011.
- Reviewer for the International Journal of Data Engineering (**IJDE**), 2011.
- Reviewer for International Journal of Distributed and Parallel Databases (**DAPD**), 2010.
- External reviewer for **VLDB Journal** ('09).

University Service

- Member of the Arizona State University Transfer Matters Task Force. Studied aspects of the transfer student experience related to learning and helped in the preparation of a plan for institutional improvement that leads to higher levels of transfer student learning and graduation. August 2015 - May 2016.
- Member of the Arizona State University Big Data/Analytics Working Group. Studied and proposed mechanisms to improve and integrate the different research efforts in Big Data at ASU. April 2015 - December 2015.
- Member of the Arizona State University Martin Luther King, Jr. Committee, 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, and 2020-2021. I helped organize and volunteered at ASU-West's signature March on West event. This event celebrates the legacy of Martin Luther King Jr.

College Service

- Member of the NCIAS Web Champions team. Helped to coordinate tasks related to the ASU Web 2.0 initiative. October 2020 - Present.
- Panelist in the ASU TRAIN Online Mixer. May 2020.
- Member of the committee for evaluating graduate program director applications. May 2019.
- Panelist in the New College CV Workshop. September 18, 2018.
- Panelist in the New College CV Workshop. September 12, 2017.
- Poster judge at the 1st Annual ASU Undergraduate Research and Creative Projects Symposium. April 28, 2016.
- Exhibitor at the ASU Open Door @ West event. Presented the results of my *DBSnap* research project and the principles of coding and querying databases. February 6, 2016.
- Member of the search committee for the Director of the School of Mathematical and Natural Sciences. August 2015 - March 2016.
- Member of the NCUIRE application review committee. Reviewed different types of NCUIRE applications. March 2015 - April 2015.

- Exhibitor at the ASU Open Door @ West event. Presented the results of my *DBSnap* research project and the principles of coding and querying databases. March 28, 2015.
- Exhibitor at the ASU Summer Collegiate Experience (SCE) event. Demonstrated the result of my research work (*DBSnap Project*) to 7th and 8th graders. June 25, 2014.
- Member of the New College of Interdisciplinary Arts and Sciences' Web-steering Committee. I provide faculty input for web re-design. October 2013 - December 2014.

Department/School Service

- Chair of the search committee for an Applied Computing Lecturer position. November 2020 - March 2021.
- Member of the Covid-19 student outreach faculty team. Called students to get information about Covid-19 related issues and provide information about available resources. May 2020 - June 2020.
- Chair of the search committee for an Applied Computing Lecturer position. October 2019 - March 2020.
- Panelist in the STEM Transfer & Career Panel at Paradise Valley Community College. November 2019.
- Chair of the School of Mathematical and Natural Science's website committee. Coordinated the process to design a new MNS website. January 2019 - Present.
- Chair of the search committee for an Applied Computing tenure-track faculty member in Cybersecurity. October 2017 - March 2018.
- Member of the School of Mathematical and Natural Science's Curriculum Committee. I reviewed, provided feedback on, and participated in the approval process of curriculum changes. January 2017 - Present.
- Member of the School of Mathematical and Natural Science's Maker Space Committee. Provided faculty feedback to the Maker Space's coordinator. January 2017 - May 2017.
- Faculty Ambassador. Assisted in the prospective student call campaign. April 2016.
- Member of the School of Mathematical and Natural Science's 2015 Degree Assessment Committee. I completed assessment forms for Applied Computing programs. August 2015 - September 2015.
- Member of the search committee for an Applied Computing Instructor. April 2015 - June 2015.
- Arizona Course Equivalency Tracking System (ACETS) reviewer for the School of Mathematical and Natural Sciences. I evaluated the similarity of courses taken by transfer students at other institutions and ASU courses to allow transfer credit. January 2015 - Present.
- Member of the search committee for an Applied Computing tenure-track faculty member in Cyberforensics. September 2014 - March 2015.
- Member of the School of Mathematical and Natural Science's 2014 Degree Assessment Committee. I completed assessment forms for Applied Computing programs. August 2014 - September 2014.
- Advisor of the Linux User's Group at the ASU West campus (student club). August 2013 - May 2014.
- Member of the School of Mathematical and Natural Science's 2013 Degree Assessment Committee. I completed assessment forms for Applied Computing programs. August 2013 - September 2013.
- School representative in the Terra Verde Services Internship Committee. In this position, I help to coordinate the internship program, motivate students to engage in professional applications of their learning, and assist them in obtaining such opportunities. January 2012 - December 2012.
- Student Representative of AMIGOS, a Purdue University association that aims to support and

empower Latinos and other under-represented minorities in computer science and related fields.
August 2009 - August 2010.

- Purdue University coordinator of the *Latinos in Academic Advancement* Program that brought Hispanic high school students to Purdue University to encourage post-secondary education and to explore various career possibilities in Computer Science. October 2009.

External Community Service

- Presenter at the Liberty High School College/Career Fair 2011. March 2011.
- Grand Awards Judge for Computer Science at the Intel International Science and Engineering Fair. May 2006.
- Co-founder of *Hands-On Spanish Travel* (HOST). HOST offers several cultural and social service-based programs aimed to create awareness and acceptance of the Hispanic community. July 2006 - Present.

Student Research Poster Presentations

These are posters presented by my student mentees, undergraduate students are underlined, graduate student are identified with an asterisk (*).

- Advisors: **Y. N. Silva** and D. L. Hall, Students: J. Spokes, T. Strom, P. Solanki*, H. Seeley*, S. Thibault*. *ActionPoint: Action-Driven App to Strengthen Parent-Teen Relationships to Understand and Identify Cyberbullying*. Undergraduate Track of the 2019 SaTC PI Meeting, Alexandria, Virginia, USA, 2019.
- Advisors: **Y. N. Silva** and D. L. Hall, Students: T. Strom, J. Spokes, N. Alejandro. *ActionPoint: Action-driven App to Strengthen Parent-Teen Relationships to Combat Cyberbullying*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2019.
- Advisor: **Y. N. Silva**, Students: M. Sandoval, D. Prado, X. Wallace. *Similarity Grouping for Big Data – Experimental Evaluation*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2019.
- Advisors: **Y. N. Silva** and D. L. Hall, Students: R. Conway, T. Strom, J. Spokes, C. Sanchez, V. Delgadillo, T. Schenk. *Evaluating a Model to Predict Cyberbullying in Social Networks*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2018.
- Advisor: **Y. N. Silva**, Students: J. Starks, E. Cristal, M. Sandoval, D. Prado, X. Wallace. *Similarity Group By for Big Data Analytics*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2018.
- Advisor: **Y. N. Silva**, Students: A. Vann, A. Symons, T. Schenk. *A Learning Environment to Create Data-aware Programs*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2018.
- Advisor: **Y. N. Silva**, Students: C. Brown, G. Garcia, B. Sawkins. *BullyBlocker: Designing and Implementing a Model to Identify Cyberbullying in Facebook*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2017. This poster received an **honorable mention** in the Best NCUIRE Poster or Creative Project category. The poster was also showcased at the **Global Security PLuS Symposium**, University of New South Wales, Sydney, Australia, 2017.
- Advisor: **Y. N. Silva**, Students: A. V. Nieuwenhuyse, T. Schenk, A. Symons. *DBSnap++: A Learning Environment to Create Data-aware Programs*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2017.
- Advisor: **Y. N. Silva**, Students: N. Middlebrook, J. Starks. *Similarity Grouping for Big Data*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2017.

- Advisor: **Y. N. Silva**, Participants: J. Reed, K. Brown, A.J. Wadsworth, C. Rong, N. Middlebrook. *An Experimental Survey of MapReduce-based Similarity Joins*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2016. This poster was awarded the **second place** in the Posters without Oral Presentation category.
- Advisor: **Y. N. Silva**, Students: C. Rich, B. Sawkins, G. Garcia. *Designing and Implementing an App to Identify Cyberbullying in Facebook*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2016.
- Advisor: **Y. N. Silva**, Students: A. Goldsmith, A. V. Nieuwenhuys, A. Symons. *Incorporating Advanced Features into DBSnap*. **Undergraduate Research and Creative Projects Symposium**, Arizona State University, Arizona, USA, 2016.
- Advisor: **Y. N. Silva**, Students: C. Rich, J. Chon, G. Hunter. *BullyBlocker: Building an App to Identify Cyberbullying in Facebook*. **18th Annual Scholarship Recognition Reception at ASU-West**, Arizona State University, Arizona, USA, 2015.
- Advisor: **Y. N. Silva**, Students: A.J. Wadsworth, K. Brown, J. Reed. *MapReduce-based Similarity Grouping for Big Data*. **18th Annual Scholarship Recognition Reception at ASU-West**, Arizona State University, Arizona, USA, 2015.
- Advisor: **Y. N. Silva**, Students: K. Gervais, A.J. Wadsworth, J. Reed. *MapReduce-based Similarity Join Survey*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2015.
- Advisor: **Y. N. Silva**, Students: C. Rich, J. Chon, G. Hunter. *BullyBlocker: Building an App to Identify Cyberbullying in Facebook*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2015.
- Advisor: **Y. N. Silva**, Students: J. Chon. *DBSnap: Querying Databases by Snapping Blocks*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2015.
- Advisor: **Y. N. Silva**, Students: J. Reed, L. Tsosie, T. Matti, K. Gervais. *Similarity Join for Big Geographic Data*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2014.
- Advisor: **Y. N. Silva**, Students: S. Pearson, J. Chon, R. Roberts. *Multi-way Similarity Joins*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2014.
- Advisor: **Y. N. Silva**, Students: L. Tsosie, T. Tucker, J. Cheney. *BullyBlocker: Identifying Cyberbullying in Facebook*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2014.
- Advisor: **Y. N. Silva**, Students: S. Pearson. *Index-based Similarity Joins*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2013.
- Advisor: **Y. N. Silva**, Students: L. Tsosie. *Facebully: Identifying Cyberbullying in Facebook*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2013. This poster was awarded the **second prize** in the Mathematical and Natural Sciences category.
- Advisor: **Y. N. Silva**, Students: L. Tsosie. *Facebully: Identifying Cyberbullying in Facebook*. **MGE@MSA Arizona 11th Annual Student Research Conference - More Graduate Education @ Mountain States Alliance**, Arizona State University, Arizona, USA, 2013.
- Advisor: **Y. N. Silva**, Students: S. Pearson. *Exploiting Database Similarity Joins for Metric Spaces*. **NCUIRE at Open Door @ ASU West**, Arizona State University, Arizona, USA, 2013.
- Advisor: **Y. N. Silva**, Students: J. M. Reed. *Exploiting MapReduce-based Similarity Joins*. **NCUIRE Research Presentation**, Arizona State University, Arizona, USA, 2012.

- Advisor: **Y. N. Silva**, Students: S. Pearson. *Exploiting Database Similarity Joins for Metric Spaces*. **NCUIRE Research Presentation**, Arizona State University, Arizona, USA, 2012.
- Advisor: **Y. N. Silva**, Students: J. M. Reed. *Exploiting MapReduce-based Similarity Joins*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2012.
- Advisor: **Y. N. Silva**, Students: S. Pearson. *Similarity Join Database Operator for Multi-Dimensional Data*. **New College's Undergraduate Student Research and Creative Projects Expo**, Arizona State University, Arizona, USA, 2012.
- Advisor: **Y. N. Silva**, Students: J. M. Reed. *Cloud Similarity Join for Multi-Dimensional Data*. **NCUIRE Poster Expo at EX-Static**, Arizona State University, Arizona, USA, 2012.
- Advisor: **Y. N. Silva**, Students: S. Pearson. *Similarity Join Database Operator for Multi-Dimensional Data*. **NCUIRE Poster Expo at EX-Static**, Arizona State University, Arizona, USA, 2012.
- Advisor: **Y. N. Silva**, Students: J. M. Reed. *Cloud Similarity Join for Multi-Dimensional Data*. **Inquire about NCUIRE**, Arizona State University, Arizona, USA, 2011.
- Advisor: **Y. N. Silva**, Students: S. Pearson. *Similarity Join Database Operator for Multi-Dimensional Data*. **Inquire about NCUIRE**, Arizona State University, Arizona, USA, 2011.

Professional Organizations

- Member of the Association for Computing Machinery (**ACM**)
 - Member of the ACM Special Interest Group on Management of Data (**SIGMOD**)
 - Member of the ACM Special Interest Group on Computer Science Education (**SIGCSE**)
- Member of the Institute of Electrical and Electronics Engineers (**IEEE**)
- Member of the IEEE Technical Committee on Data Engineering (**TCDE**)

Research Interests

My research focuses on innovative ways to analyze and process data. My specific areas of interest include: social media analysis, online misbehavior detection, social computing, cyberbullying detection in social networks, big data, similarity-aware data analysis, scalable database systems, and fairness and transparency in AI.

Languages

Native Spanish, fluent English, basic Portuguese and basic Quechua.