Rolando S. Garcia

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EDUCATION

Arizona State University, Tempe, Arizona
Bachelors of Science in Computer Science, March 2014 - May 2017 (*expected*)
GPA: 4.00 (weighted, as appears in transcripts), 3.88 (unweighted)

HONORS AND AWARDS

- Honorable Mention, **Computing Research Association's Outstanding Undergraduate Researcher Award** for PhD-granting Institutions, 2017.
- **Undergraduate Research Award**, Fulton Undergraduate Research Initiative, Arizona State University, Spring 2016 ($1500).
- **Visual Analytics Science and Technology (VAST) Grand Challenge Award: Outstanding Comprehensive Submission**. IEEE Conference on Visual Analytics Science and Technology, 2015. *(Awarded to Steptoe M., Krueger R., Zhang Y., Liang X., Garcia R., Kadambi S., Luo W., Ertl T., Maciejewski, R.)*
- **Dean's List**, Arizona State University. Fall 2014 – present.
- **Franke Scholars Scholarship**, Northern Arizona University. Spring 2013. ($5000)
- **Gerety and Thompson Scholarship**, Northern Arizona University. Spring 2011 – Fall 2011.

RESEARCH EXPERIENCE

Computational Genetics Laboratory, Institute for Biomedical Informatics, University of Pennsylvania, Philadelphia, PA.
Research Aide, June 2016 – August 2016
Leadership Alliance program participant
Advisor: Dr. Jason Moore
Projects:

Deep Learning Feature of TPOT (DELFT), June 2016 – August 2016.
github.com/rlnsanz/delft

- An extension of the Tree-based Pipeline Optimization Tool (TPOT) supporting the automatic design and optimization of deep learning architectures.

Visual Analytics and Data Exploration Research Lab, Arizona State University, Tempe, AZ.
Research Aide, January 2015 – present
Advisor: Dr. Ross Maciejewski
Projects:

***NSF REU**: Visual Analytics Algorithms for Spatiotemporal Analysis*, August 2016 – Present.

- Implemented various classification metrics of cluster stability and a method for estimating the number of clusters in a data set, to support quantifying the visual impact of classification boundaries in choropleth maps.
- This project is in progress.

Visual Analytics of Scientific Impact, January 2016 – May 2016.

- Developed a visual analytics system for assessing the sub-domain influence and scientific impact of top-ranking research universities, enabling users to make predictions about changes in university rankings.
- Allow user to identify key faculty members by comparing individual publication statistics and performance metrics such as the H-index.
- Give the user an overview of a university's research priorities by extracting meaningful keywords from affiliated faculty publications and university websites.

DinoFun World Visual Analytics System (Award: IEEE VAST Grand Challenge 2015)

- In collaboration with team VADER/VIS, developed a visual analytics system to help explore the spatiotemporal movement and communication data of park attendees. The system combines data wrangling, trajectory analysis, network analysis, and interactive visualizations for discovering movement and communication patterns of users and their networks.
- Used the system to correctly identify the culprit from a set of 11,374 park attendees.
- Raw data contained approximately 28 million records in the following relation schemas: Movement (visitorID, timestamp, type, x, y) and Communication (timestamp, from, to, location).

TEACHING EXPERIENCE

Arizona State University, Tempe, AZ.
Undergraduate Teaching Assistant

- CSE 240: Introduction to Programming Languages, Fall 2015, 267 students.

Northern Arizona University, Flagstaff, AZ.
Student Instructor

- PHI 105: Introduction to Ethics, Fall 2013, 50 students.

PUBLICATIONS

Steptoe, M., Krueger, R., Zhang, Y., Liang, X., Luo, W., **Garcia, R**., Kadambi, S., Ertl, T., Maciejewski, R. VADER/VIS VAST 2015 Grand Challenge Entry. *Proceedings of the IEEE Visual Analytics Science and Technology Challenge Workshop*, 2015.

POSTERS & PRESENTATIONS

Garcia, R., Olson, R., Moore, J. "Automatic Design and Optimization of Deep Learning Architectures". The Annual Summer Undergraduate Internship Program Research Symposium, University of Pennsylvania, Philadelphia, PA. August 2016. Poster.

Garcia, R., Olson, R., Moore, J. "Automatic Design and Optimization of Deep Learning Architectures". The Leadership Alliance National Symposium, Stamford, CT. July 2016. Talk.

Garcia, R., Maciejewski, R. "Visual Analytics of Scientometrics". Fulton Undergraduate Research Initiative Symposium, Arizona State University, Tempe, AZ. April 2016. Poster.

Steptoe, M., Krueger, R., Zhang, Y., **Garcia, R**., Kadambi, S., Luo, W., Ertl, T., Maciejewski, R. "VAST 2015 Grand Challenge – Team VADER/VIS". IEEE Visual Analytics Science and Technology Conference, Chicago, IL. October 2015. Poster & Talk.