Rolando S. Garcia

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Education

University of California, Berkeley — Berkeley, CA
Ph.D. in Computer Science — *Fall 2017 – Present*

Arizona State University — Tempe, AZ
B.S. in Computer Science, *Summa Cum Laude* — *Spring 2014 – Spring 2017*

Awards and Fellowships

NSF Graduate Research Fellowship	2017
UC Berkeley's Chancellor Fellowship	2017
UC Berkeley's EECS Excellence Award	2017
CRA Outstanding Undergraduate Researcher Award, honorable mention	2017
Fulton Undergraduate Research Initiative, research award	2016
IEEE VAST Grand Challenge Award, outstanding comprehensive submission	2015

Research

RISE Lab `rise.cs.berkeley.edu` — June 2017 – Present
Graduate Researcher, advised by Joe Hellerstein — *University of California, Berkeley*

- FLOR, Fast Low-Overhead Recovery: Record-Replay of Model Training for Hindsight Logging.
- Context capture, inference, and management in the Machine Learning Lifecycle.

Amazon Search — May 2018 – January 2019
Research Internship supervised by Chris Severs — *Palo Alto, CA*

- Context capture and management of enterprise-scale model training pipelines.
- Distributed scheduling of enterprise-scale model training pipelines.

VADER Lab `vader.lab.asu.edu` — January 2015 – May 2017
Undergraduate Researcher, advised by Ross Maciejewski — *Arizona State University, Tempe*

- NSF REU: Visual Analytics Algorithms for Spatiotemporal Analysis.
- Visual Analytics of Crowd Spatiotemporal Data (VAST Grand Challenge Award).
- Visual Analytics of Scientometrics.

Computational Genetics Lab `epistasis.org` — June 2016 – August 2016
Undergraduate Researcher, advised by Randy Olson and Jason Moore — *University of Pennsylvania, Philadelphia*

- DELFT: Deep Learning Feature of TPOT.
- Leadership Alliance participant.

Publications

Operationalizing Machine Learning: An Interview Study — in *CHI* 2023
Shreya Shankar, *Rolando Garcia* (Co-First Author), Joseph M. Hellerstein, Aditya G. Parameswaran
ACM *CHI Conference on Human Factors in Computing Systems*, VV(E): XXX-XXX, 2023.
Honorable Mention: MLOps Community Best Paper Award

Hindsight Logging for Model Training in *PVLDB* 2021
Rolando Garcia, Eric Liu,Vikram Sreekanti, Bobby Yan, Anusha Dandamudi, Joseph E. Gonzalez, Joseph M. Hellerstein, Koushik Sen. *Proceedings of the VLDB Endowment*, 14(4): 682-693, 2021.

Context: The Missing Piece in the Machine Learning Lifecycle in *CMI* 2018
Rolando Garcia, Vikram Sreekanti, Neeraja Yadwadkar, Daniel Crankshaw, Joseph E. Gonzalez, Joseph M. Hellerstein. *Workshop on Common Model Infrastructure* at KDD, 2018.

A Visual Analytics Framework for Exploring Theme Park Dynamics in *ACM TIIS* 2018
Michael Steptoe, Robert Krüger, *Rolando Garcia*, Xing Liang, Ross Maciejewski. *ACM Transactions on Interactive Intelligent Systems*, 2018.

The State-of-the-Art in Predictive Visual Analytics in *CGF* 2017
Yafeng Lu, *Rolando Garcia*, Brett Hansen, Michael Gleicher, Ross Maciejewski. *Computer Graphics Forum*, 2017.

VADER/VIS Grand Challenge Entry in *VAST* 2015
Michael Steptoe, Robert Krüger, Yifan Zhang, Xing Liang, *Rolando Garcia*, Sagarika Kadambi, Wei Luo, Thomas Ertl, Ross Maciejewski. *Proceedings of the IEEE VAST Challenge Workshop*, 2015.

Talks

FLOR: Managing the Infinite Virtual Metadata of Model Training at *Cornell DB Seminar*
Rolando Garcia. Cornell, February 2022.

Hindsight Logging for Model Training at *VLDB* 2021
Rolando Garcia, Eric Liu, Vikram Sreekanti, Anusha Dandamudi, Bobby Yan, Joseph Gonzalez, Koushik Sen Joseph Hellerstein. Copenhagen. August 2021.

Choose What to Log, After you Execute at *RISE Retreat* 2019
Rolando Garcia, Eric Liu, Vikram Sreekanti, Anusha Dandamudi, Bobby Yan, Joseph Gonzalez, Koushik Sen Joseph Hellerstein. Retreat talk to lab sponsors. Monterey, CA. January 2019.

ML in Context: Preserve, Share, and Analyze Experiments with Flor at *RISE Camp* 2018
Rolando Garcia, Vikram Sreekanti, Neeraja Yadwadkar, Daniel Crankshaw, Sona Jeswani, Eric Liu, Malhar Patel, Joseph Gonzalez, Joseph Hellerstein. Talk and Tutorial for lab sponsors. Berkeley, CA. October 2018.

Context: The Missing Piece in the Machine Learning Lifecycle at *KDD* 2018
Rolando Garcia, Vikram Sreekanti, Neeraja Yadwadkar, Daniel Crankshaw, Joseph Gonzalez, Joseph Hellerstein. *The* 24^{th} *ACM SIGKDD International Conference*, London. August 2018.

Data Management Challenges in the Machine Learning Lifecycle at *Amazon* 2018
Rolando Garcia, Vikram Sreekanti, Daniel Crankshaw, Neeraja Yadwadkar, Sona Jeswani, Eric Liu, Malhar Patel, Joseph Gonzalez, Joseph Hellerstein. Invited talk at Amazon Search. Palo Alto, CA. April 2018.

Design, Run, and Reproduce Experiments with Jarvis at *RISE Retreat* 2018
Rolando Garcia, Vikram Sreekanti, Daniel Crankshaw, Neeraja Yadwadkar, Alexey Tumanov, Joseph Gonzalez, Joseph Hellerstein. Retreat talk to lab sponsors. Monterey, CA. January 2018.

Jarvis: Managing the Machine Learning Lifecycle at *Google* 2017
Rolando Garcia, Vikram Sreekanti, Daniel Crankshaw, Neeraja Yadwadkar, Alexey Tumanov, Joseph Gonzalez, Joseph Hellerstein. Invited talk at Google. Mountain View, CA. September 2017.

The State-of-the-Art in Predictive Visual Analytics at *EuroVis* 2017
Yafeng Lu, *Rolando Garcia*, Brett Hansen, Michael Gleicher, Ross Maciejewski Eric Liu,Vikram Sreekanti, Bobby Yan, Anusha Dandamudi, Joseph E. Gonzalez, Joseph M. Hellerstein, Koushik Sen. 19^{th} *EG/VGTC Conference on Visualization*, Barcelona, Spain. June 2017.

Automatic Design and Optimization of Deep Learning Models at *LANS* 2016
Rolando Garcia, Randal Olson, Jason Moore. *The Leadership Alliance National Symposium*, Stamford, CT. July 2016.

VAST 2015 Grand Challenge – Team VADER/VIS at *VAST* 2015
Michael Steptoe, Robert Krüger, Yifan Zhang, Xing Liang, *Rolando Garcia*, Sagarika Kadambi, Wei Luo, Thomas Ertl, Ross Maciejewski. *IEEE Visual Analytics Science and Technology Conference*, Chicago, IL. October 2015.

Teaching

Introduction to Database Systems (COMPSCI 186/286) Spring 2018
Graduate Student Instructor, 450 students *University of California, Berkeley*

Introduction to Programming Languages (CSE 240) Fall 2015
Undergraduate Student Instructor, 267 students *Arizona State University, Tempe*

Introduction to Ethics (PHI 105) Fall 2013
Undergraduate Student Instructor, 50 students *Northern Arizona University, Flagstaff*

Service

Diversifying Access to Research in Engineering (DARE) June 2020 – Present
Organizer | dare.berkeley.edu *University of California, Berkeley*

DARE is a recruitment program and hiring infrastructure that seeks to increase diversity and equitable opportunity in undergraduate computer science research. DARE was founded by the RISE lab, and now enlists more than 30 faculty members and their labs from across the EECS department.

- Promoted outreach to students with financial needs, transfer students, and students with demonstrated service toward increasing diversity and inclusion.
- I noticed that some undergraduate researchers struggled with inadequate and unreliable computers, and this interfered with their ability to do research. I sought and received university funding for DARE to acquire laptops it can furnish to undergraduate researchers with financial need. We can now give laptops to students who need them for undergraduate research.

EECS Graduate Admissions Fall 2021
Graduate Student Representative | dsf.berkeley.edu *University of California, Berkeley*

Data Systems and Foundations Seminar Fall 2020
Coordinator | dsf.berkeley.edu *University of California, Berkeley*

Graduate Pathways to STEM June 2017 – December 2019
Peer Advising Co-Chair and Peer Advisor | GPS Hyperlink *UC Berkeley & Stanford*

A program and conference that mentors undergraduate students, especially those without access to academic or professional insiders, through the graduate school application process. GPS assists with graduate student applications, and assigns each undergraduate student a graduate student mentor to bridge some of that inequity gap. The graduate student mentor support the undergraduate student a full semester, throughout the graduate school application process.