Rolando S. Garcia, Ph.D.

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Education

University of California, Berkeley — Berkeley, CA
Ph.D. in Computer Science advised by Dr. Joseph M. Hellerstein — *Summer 2017 - Summer 2024*
Dissertation: *The Management of Context in the Machine Learning Lifecycle*

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

Northern Arizona University — Flagstaff, AZ
91 credits at 3.97 GPA in Philosophy, English, Accounting — *Fall 2010 – Fall 2013*

Awards and Fellowships

ASU Presidential Postdoctoral Fellowship, Ira A. Fulton Schools of Engineering	2024
Dell Technologies Inc. Research Award, one year of funding	2023
NSF Graduate Research Fellowship	2017
UC Berkeley Chancellor's 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

School of Computing & AI `scai.engineering.asu.edu` — July 2024 – Present
Presidential Postdoctoral Scholar, advised by Dr. Ross Maciejewski — *Arizona State University*

- *Under submission*:
  - ∗ Is the growth of AI/ML conf' submissions overstraining peer review? *Scientometrics*, Seto et al.
    - · Co-authored with Christian Seto (PhD@ASU), and Ross Maciejewski.
  - ∗ NSF MFAI: *Explaining GNNs: Where and When, Where and Why*, w/ Yixuan He[1] et al.
    - · Co-PI at 20% effort, $1.4M over 3 years.
- *In progress*:
  - ∗ Computer-supported Peer Review: A ReviewerApp User Study, w/ Fan Lei et al.
    - · Mentoring ASU undergraduate student in computer science (B.S.) Akshit Jain
  - ∗ Interactive Lab Notebooks for Robotics Research, w/ Duarte et al.
    - · Mentoring ASU master's student in robotics and autonomous systems (M.S.) Erick Duarte
  - ∗ Multiversion Hindsight Logging for the ML Lifecycle, w/ Hellerstein et al.
  - ∗ Collaboration with UTEP to establish an HSI computer science PhD program, w/ Teresa Wu et al.
  - ∗ NSF LS: *Addressing Barriers to AI Adoption in Legal and Public Sectors*, w/ Baral & Marchant

RISE Lab | EPIC Data Lab `{rise.cs, epic}.berkeley.edu` — June 2017 – June 2024
Graduate Researcher, advised by Dr. Joe Hellerstein — *University of California, Berkeley*

- FlorDB: a hindsight logging database for the machine learning lifecycle. — `github.com/ucbrise/flor`
- . . . How Engineers Operationalize Machine Learning, w/ Shreya Shankar et al.
- **Internships**: Amazon Search, Linea Labs (*startup*).

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[1] School of Mathematical and Natural Sciences

VADER Lab `vader.lab.asu.edu` January 2015 – May 2017

Undergraduate Researcher, advised by Dr. Ross Maciejewski *Arizona State University*

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

PEER-REVIEWED PUBLICATIONS

Flow with FlorDB: Incremental Context Maintenance for the ML Lifecycle *CIDR* 2025
Rolando Garcia, Pragya Kallanagoudar, Chithra Anand, Sarah E. Chasins,
Erin M. Kerrison, Aditya G. Parameswaran, Joseph M. Hellerstein.
Conference on Innovative Data Systems Research, 2025.

"We Have No Idea How Models will Behave in Production until Production": *CSCW* 2024
How Engineers Operationalize Machine Learning
Shreya Shankar[*], *Rolando Garcia*[*], Joseph M. Hellerstein, Aditya G. Parameswaran.
ACM Conf' on Computer Supported Cooperative Work and Social Computing 2024.
[*]Co-first authors. **Honorable Mention:** MLOps Community Best Paper Award

Quilt: Custom UIs for Linking Unstructured Documents *UIST Demo* 2024
to Structured Dataasets
Pragya Kallanagoudar, Chithra Anand, *Rolando Garcia*, Rebecca M. M. Hicke,
Aditya G. Parameswaran, Eunice Jun , Sarah E. Chasins. *UIST Adjunct '24:*
Proceedings of the 37th Annual ACM Symposium on User Interface Software
and Technology, 2024.

Hindsight Logging for Model Training *VLDB* 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 *KDD 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 *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 *CGF* 2017
Yafeng Lu, *Rolando Garcia*, Brett Hansen, Michael Gleicher, Ross Maciejewski.
Computer Graphics Forum, 2017.

VADER/VIS Grand Challenge Award *IEEE 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.

Incremental Context Maintenance for the ML Lifecycle — *CIDR* 2025 — Amsterdam
Rolando Garcia, Pragya Kallanagoudar, Chithra Anand, Sarah E. Chasins,
Erin M. Kerrison, Aditya G. Parameswaran, Joseph M. Hellerstein.
Conference on Innovative Data Systems Research. January 2025.

How Engineers Operationalize Machine Learning — *CSCW* 2024 — Costa Rica
Shreya Shankar, *Rolando Garcia*, Joseph M. Hellerstein, Aditya G. Parameswaran.
ACM Conf' on Computer Supported Cooperative Work and Social Computing.
November 2024.

Flow with FlorDB: Agile MLOps without Compromises — *Mines Seminar*, 2024 — Golden, CO
Rolando Garcia. Colorado School of Mines. October 2024.

Operationalizing Machine Learning: An Interview Study — *Flyte, 2022*
Rolando Garcia, Shreya Shankar. December 2022.

Operationalizing Machine Learning: An Interview Study — *Inaugural Address, 2022* — EPIC, UC Berkeley
Shreya Shankar, *Rolando Garcia.* Berkeley, CA, October 2022.

Operationalizing Machine Learning: An Interview Study — *Canva, 2022*
Shreya Shankar, *Rolando Garcia.* October 2022.

Operationalizing Machine Learning: An Interview Study — *MLOps World, 2022* — San Francisco
Shreya Shankar, *Rolando Garcia.* San Francisco Bay Area, October 2022.

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

Hindsight Logging for Model Training — *VLDB* 2021 — Copenhagen
Rolando Garcia, Eric Liu, Vikram Sreekanti, Anusha Dandamudi, Bobby Yan,
Joseph Gonzalez, Koushik Sen, Joseph Hellerstein. *International Conference
on Very Large Databases.* August 2021.

Choose What to Log, After you Execute — *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 — *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 — *KDD* 2018 — London
Rolando Garcia, Vikram Sreekanti, Neeraja Yadwadkar, Daniel Crankshaw,
Joseph Gonzalez, Joseph Hellerstein. *The 24th ACM SIGKDD Intl' Conf.* August 2018.

Data Management Challenges in the Machine Learning Lifecycle *Amazon* 2018
Palo Alto

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 *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 *Google* 2017
Mountain View

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 *EuroVis* 2017
Barcelona

Yafeng Lu, *Rolando Garcia*, Brett Hansen, Michael Gleicher, Ross Maciejewski.
19th *EG/VGTC Conference on Visualization*, Barcelona, Spain. June 2017.

Automatic Design and Optimization of Deep Learning Models *LANS* 2016

Rolando Garcia, Randal Olson, Jason Moore.
The Leadership Alliance National Symposium, Stamford, CT. July 2016.

VAST 2015 Grand Challenge – Team VADER/VIS *VAST* 2015
Chicago

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 – December 2022
Organizer | dare.berkeley.edu *University of California, Berkeley*

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

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