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*

- *Accepted and presented at conferences*:
    - **CIDR 2025**: *Flow with FlorDB: Incr'l Context Maint. for the ML Lifecycle* (Amsterdam)
    - **CSCW 2024**: . . . *How Engineers Operationalize Machine Learning* (Costa Rica)
- *Under submission*:
    - NSF MFAI: *Explaining GNNs: Where and When, Where and Why*, w/ Yixuan He et al.
    - Is the growth of AI/ML conf' submissions overstraining peer review? *Scientometrics*, Seto et al.
- *In progress*:
    - Computer-supported Peer Review: A ReviewerApp User Study, w/ Fan Lei 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.
- **Dissertation**: The management of context in the machine learning lifecycle.
- **Internships**: Amazon Search, Linea Labs (*startup*).

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
Rolando Garcia, Pragya Kallanagoudar, Chithra Anand, Sarah E. Chasins, Amsterdam
Erin M. Kerrison, Aditya G. Parameswaran, Joseph M. Hellerstein.
Conference on Innovative Data Systems Research. January 2025.

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

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

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

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

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

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

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
Rolando Garcia, Eric Liu, Vikram Sreekanti, Anusha Dandamudi, Bobby Yan, Copenhagen
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
Rolando Garcia, Vikram Sreekanti, Neeraja Yadwadkar, Daniel Crankshaw, London
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
University of California, Berkeley

Graduate Student Instructor, 450 students

Introduction to Programming Languages (CSE 240)

Fall 2015
Arizona State University, Tempe

Undergraduate Student Instructor, 267 students

Introduction to Ethics (PHI 105)

Fall 2013
Northern Arizona University, Flagstaff

Undergraduate Student Instructor, 50 students

Service

Diversifying Access to Research in Engineering (DARE)

June 2020 – December 2022
University of California, Berkeley

Organizer | dare.berkeley.edu

EECS Graduate Admissions

Fall 2021
University of California, Berkeley

Graduate Student Representative | eecs.berkeley.edu

Data Systems and Foundations Seminar

Fall 2020
University of California, Berkeley

Coordinator | dsf.berkeley.edu