

# 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](https://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.
- \* NSF MFAI: *Explaining GNNs: Where and When, Where and Why*, w/ Yixuan He 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.berkeley.edu](https://rise.cs.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.
- ... 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*).

[github.com/ucbrise/flor](https://github.com/ucbrise/flor)

## RESEARCH (CONT'D)

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**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

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### **Flow with FlorDB: Incremental Context Maintenance for the ML Lifecycle**

*CIDR* 2025

Rolando Garcia, Pragma 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”: How Engineers Operationalize Machine Learning**

*CSCW* 2024

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 to Structured Dataasets**

*UIST Demo* 2024

Pragma 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,  
Erin M. Kerrison, Aditya G. Parameswaran, Joseph M. Hellerstein.  
*Conference on Innovative Data Systems Research*. January 2025.

Amsterdam

**How Engineers Operationalize Machine Learning**

CSCW 2024

Shreya Shankar, Rolando Garcia, Joseph M. Hellerstein, Aditya G. Parameswaran.  
*ACM Conf' on Computer Supported Cooperative Work and Social Computing*.  
November 2024.

Costa Rica

**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,  
Joseph Gonzalez, Koushik Sen, Joseph Hellerstein. *International Conference  
on Very Large Databases*. August 2021.

Copenhagen

**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,  
Joseph Gonzalez, Joseph Hellerstein. *The 24<sup>th</sup> ACM SIGKDD Intl' Conf*. August 2018.

London

## TALKS (CONT'D)

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### **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.  
*19<sup>th</sup> 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

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### **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

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### **Diversifying Access to Research in Engineering (DARE)**

June 2020 – December 2022

Organizer | [dare.berkeley.edu](http://dare.berkeley.edu)

*University of California, Berkeley*

### **EECS Graduate Admissions**

Fall 2021

Graduate Student Representative | [eecs.berkeley.edu](http://eecs.berkeley.edu)

*University of California, Berkeley*

### **Data Systems and Foundations Seminar**

Fall 2020

Coordinator | [dsf.berkeley.edu](http://dsf.berkeley.edu)

*University of California, Berkeley*