

# ROLANDO S. GARCIA

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## EDUCATION

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### University of California, Berkeley

Ph.D. in Computer Science advised by Dr. Joseph M. Hellerstein

Dissertation: *The Management of Context in the Machine Learning Lifecycle*

Berkeley, CA

Fall 2017 - Summer 2024

### Arizona State University

B.S. in Computer Science, *Summa Cum Laude*

Tempe, AZ

Spring 2014 - Spring 2017

## AWARDS AND FELLOWSHIPS

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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

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### School of Computing & AI [scai.engineering.asu.edu](http://scai.engineering.asu.edu)

Presidential Postdoctoral Scholar, advised by Dr. Ross Maciejewski

July 2024 – Present

*Arizona State University*

- NSF MFAI: Explaining GNNs: Where and When, Where and Why
- NSF LS: Addressing SocioTechnical Barriers to AI Adoption in the Legal and Public Sectors

### EPIC Data Lab [epic.berkeley.edu](http://epic.berkeley.edu)

Graduate Researcher, advised by Dr. Joe Hellerstein

June 2021 – June 2024

*University of California, Berkeley*

- Operationalizing ML: An interview study, w Shreya Shankar et al.
- NSF Future of Work: Upskilling lawyers and journalists to process court cases at scale.

### RISE Lab [rise.cs.berkeley.edu](http://rise.cs.berkeley.edu)

Graduate Researcher, advised by Dr. Joe Hellerstein

June 2017 – June 2021

*University of California, Berkeley*

- FlorDB: Multiversion Hindsight Logging for Continuous Training
- Context capture, inference, and management in the Machine Learning Lifecycle.

### VADER Lab [vader.lab.asu.edu](http://vader.lab.asu.edu)

Undergraduate Researcher, advised by Dr. Ross Maciejewski

January 2015 – May 2017

*Arizona State University*

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

### Computational Genetics Lab [epistasis.org](http://epistasis.org)

Undergraduate Researcher, advised by Dr. Jason Moore

June 2016 – August 2016

*University of Pennsylvania*

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

- 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.

## TALKS

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- 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*. 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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<b>Data Management Challenges in the Machine Learning Lifecycle</b> <i>Rolando Garcia</i> , 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.	<i>Amazon</i> 2018 Palo Alto
<b>Design, Run, and Reproduce Experiments with Jarvis</b> <i>Rolando Garcia</i> , Vikram Sreekanti, Daniel Crankshaw, Neeraja Yadwadkar, Alexey Tumanov, Joseph Gonzalez, Joseph Hellerstein. Retreat talk to lab sponsors. Monterey, CA. January 2018.	<i>RISE Retreat</i> 2018
<b>Jarvis: Managing the Machine Learning Lifecycle</b> <i>Rolando Garcia</i> , Vikram Sreekanti, Daniel Crankshaw, Neeraja Yadwadkar, Alexey Tumanov, Joseph Gonzalez, Joseph Hellerstein. Invited talk at Google. Mountain View, CA. September 2017.	<i>Google</i> 2017 Mountain View
<b>The State-of-the-Art in Predictive Visual Analytics</b> Yafeng Lu, <i>Rolando Garcia</i> , Brett Hansen, Michael Gleicher, Ross Maciejewski. 19 <sup>th</sup> <i>EG/VGTC Conference on Visualization</i> , Barcelona, Spain. June 2017.	<i>EuroVis</i> 2017 Barcelona
<b>Automatic Design and Optimization of Deep Learning Models</b> <i>Rolando Garcia</i> , Randal Olson, Jason Moore. <i>The Leadership Alliance National Symposium</i> , Stamford, CT. July 2016.	<i>LANS</i> 2016
<b>VAST 2015 Grand Challenge – Team VADER/VIS</b> Michael Steptoe, Robert Krüger, Yifan Zhang, Xing Liang, <i>Rolando Garcia</i> , Sagarika Kadambi, Wei Luo, Thomas Ertl, Ross Maciejewski. <i>IEEE Visual Analytics Science and Technology Conference</i> , Chicago, IL. October 2015.	<i>VAST</i> 2015 Chicago

## TEACHING

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<b>Introduction to Database Systems (COMPSCI 186/286)</b> Graduate Student Instructor, 450 students	Spring 2018 <i>University of California, Berkeley</i>
<b>Introduction to Programming Languages (CSE 240)</b> Undergraduate Student Instructor, 267 students	Fall 2015 <i>Arizona State University, Tempe</i>
<b>Introduction to Ethics (PHI 105)</b> Undergraduate Student Instructor, 50 students	Fall 2013 <i>Northern Arizona University, Flagstaff</i>

## SERVICE

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<b>Diversifying Access to Research in Engineering (DARE)</b> Organizer   <a href="http://dare.berkeley.edu">dare.berkeley.edu</a>	June 2020 – December 2022 <i>University of California, Berkeley</i>
<b>EECS Graduate Admissions</b> Graduate Student Representative   <a href="http://eecs.berkeley.edu">eecs.berkeley.edu</a>	Fall 2021 <i>University of California, Berkeley</i>
<b>Data Systems and Foundations Seminar</b> Coordinator   <a href="http://dsf.berkeley.edu">dsf.berkeley.edu</a>	Fall 2020 <i>University of California, Berkeley</i>
<b>Graduate Pathways to STEM</b> Peer Advising Co-Chair and Peer Advisor   <a href="#">GPS Hyperlink</a>	June 2017 – December 2019 <i>UC Berkeley &amp; Stanford</i>