Eriq Augustine

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Education

2016 – 2023 **Ph.D., Computer Science**
Department of Computer Science and Engineering
University of California, Santa Cruz

2007 – 2013 **B.S. & M.S., Computer Science**
Department of Computer Science and Engineering
California Polytechnic State University, San Luis Obispo

Experience

2023 – Present **Postdoctoral Scholar**
University of California, Santa Cruz
Researching statistical relational learning, machine learning, and probabilistic graphical models; as well as developing curriculums, course materials, and teaching tools for Computer Science education.

2016 – 2023 **Graduate Student Researcher**
University of California, Santa Cruz
Researching statistical relational learning, machine learning, and probabilistic graphical models.

2015 – 2016 **Lead Software Developer**
Reqwest Inc
Lead developer and designer for the back and front ends of a mobile application.

2013 – 2016 **Senior Software Developer**

Gaine Solutions
Research and development on enterprise master data management solutions.

2013 – 2016 **Lecturer**
California Polytechnic State University, San Luis Obispo
Lecturer for various classes including Introduction to Databases, Discrete Structures, and Introduction to Computer Science.

2013 **Software Contractor**
Gaine Solutions
Research and development on an NLP-based question answering system.

2012 – 2013 **Student Software Engineer**
Software Inventions
Subcontracted for the Google Chrome Extensions team. Developed core software and extensions for the browser's extension engine.

2012 **Software Engineering Intern**
Google Inc.
Worked with the Google Chrome Extensions team on various bugs and new features.

2010 – 2011 **Instructor**
California Polytechnic State University, San Luis Obispo
Instructor for an entry-level computer science course designed for students who need extra help.

2009 – 2013 **Lead Tutor**
California Polytechnic State University, San Luis Obispo
Leader of a free tutoring center where any student can come for help in any computer science course.

Research Interests

- Statistical Relational Learning (SRL)
- Scalable Machine Learning Systems

- Neural Symbolic Learning (NeSy)
- Teaching Machine Learning / AI

Referred Works

Journal Papers

1. Sriram Srinivasan, Charles Dickens, **Eriq Augustine**, Golnoosh Farnadi, & Lise Getoor (2021). A Taxonomy of Weight Learning Methods for Statistical Relational Learning*. Machine Learning*.

Conference Papers

1. Charles Dickens, Connor Pryor, **Eriq Augustine**, Alex Miller, & Lise Getoor (2021). Context-Aware Online Collective Inference for Templated Graphical Models. In *International Conference on Machine Learning (ICML)*.

2. Sriram Srinivasan*, **Eriq Augustine***, & Lise Getoor (2020). Tandem Inference: An Out-of-Core Streaming Algorithm for Very Large-Scale Relational Inference. In *AAAI Conference on Artificial Intelligence (AAAI)*.

3. Aaron Rodden, Tarun Salh, **Eriq Augustine**, & Lise Getoor (2020). VMI-PSL: Visual Model Inspector for Probabilistic Soft Logic. In *ACM Conference on Recommender Systems (RecSys)*.

4. **Eriq Augustine**, & Lise Getoor (2018). A Comparison of Bottom-Up Approaches to Grounding for Templated Markov Random Fields. In *Conference on Machine Learning and Systems (MLSys)*.

5. Jay Pujara, **Eriq Augustine**, & Lise Getoor (2017). Sparsity and Noise: Where Knowledge Graph Embeddings Fall Short. In *Conference on Empirical Methods in Natural Language Processing (EMNLP)*.

6. **Eriq Augustine**, Cailin Cushing, Alex Dekhtyar, Kevin McEntee, Kimberly Paterson, & Matt Tognetti (2012). Outage Detection via Real-Time Social Stream Analysis:

Leveraging the Power of Online Complaints. In *International Conference on World Wide Web (WWW)*.

Workshop Papers

1. Charles Dickens, **Eriq Augustine**, Connor Pryor, & Lise Getoor (2021). Negative Weights in Hinge-Loss Markov Random Fields. In *Workshop on Tractable Probabilistic Modeling (TPM)*.

2. Yatong Chen, Byran Tor, **Eriq Augustine**, & Lise Getoor (2020). Decoupled Smoothing in Probabilistic Soft Logic. In *International Workshop on Mining and Learning with Graphs (MLG)*.

3. **Eriq Augustine**, Theodoros Rekatsinas, & Lise Getoor (2019). Tractable Probabilistic Reasoning Through Effective Grounding. In *Workshop on Tractable Probabilistic Modeling (TPM)*.

Tutorials

1. **Eriq Augustine**, & Golnoosh Farnadi. (2018). MLtrain: Collective Reasoning with Probabilistic Soft Logic.

Talks, Presentations, and Panels

1. "Collective Grounding: Relational Learning Meets Relational Theory", invited talk and panel discussion, Workshop on Databases and AI at NeurIPS (DBAI), December 2021. (https://neurips.cc/virtual/2021/workshop/21877)

2. "An Introduction to Probabilistic Soft Logic", invited talk, California Polytechnic State University San Luis Obispo, April 2021.

3. "Probabilistic Soft Logic (PSL): Tutorial, Latest Results & Brainstorming", Lise Getoor, **Eriq Augustine**, Varun Embar, Connor Pryor, Sriram Srinivasan, invited talk, Ernst & Young, April 2020.

4. "Grounding in PSL", invited talk, relationalAI, March 2020.

5. "Data, Discovery, and Decisions (D3): Center for Excellence in Data Science Research", **Eriq Augustine**, Connor Pryor, Golnoosh Farnadi, Pigi Kouki, Varun Embar, C. Seshadhri, Lise Getoor, invited talk, D3 Research Center, September 2018.

Awards & Honors

1. Advancement to Ph.D. Candidacy with Honors, University of California Santa Cruz, 2021.

2. JL Moore Fellowship, California Polytechnic State University San Luis Obispo, 2016 - 2018.

3. Outstanding Graduating Senior for the College of Engineering, California Polytechnic State University San Luis Obispo, 2013.

4. Best Poster Award, UCSB Graduate Student Workshop on Computing (GSW'2011), 2011, for "Detecting Service Outages via Social Media Analysis" (**Eriq Augustine**, Cailin Cushing, Alex Dekhtyar, Kevin McEntee, Kimberly Paterson, & Matt Tognetti).

Students Supervision

1. Shresta Bellary Seetharam, M.S., University of California Santa Cruz, June 2020, *Improving Image Classification with Relational Information.*

2. Vibin Vijay, M.S., University of California Santa Cruz, June 2020, *Knowledge Graph Enhanced Recommendation Systems.*

3. Jason Ting, M.S., University of California Santa Cruz, March 2020, *MOBA Item Recommendation.*

4. Vihang Godbole, M.S., University of California Santa Cruz, March 2020, *A Structured Approach to Market Making using Probabilistic Soft Logic.*

Teaching: Courses Taught

1. Introduction To Database Systems (CPE 365), California Polytechnic State University San Luis Obispo, Spring 2013, Spring 2016.

2. Fundamentals of Computer Science II (CPE 102), California Polytechnic State University San Luis Obispo, Winter 2016.

3. Discrete Structures (CPE 141), California Polytechnic State University San Luis Obispo, Winter 2015, Spring 2015.

4. Fundamentals of Computer Science I (CPE 101), California Polytechnic State University San Luis Obispo, Winter 2014.

5. Fundamentals of Computer Science - Supplemental Instruction (CPE 105), California Polytechnic State University San Luis Obispo, Winter 2011.

Teaching: Courses Developed

1. Introduction to Artificial Intelligence (CSE 140), University of California Santa Cruz, co-developed with Lise Getoor, 2019.

Advisors

Ph.D. Advisor. Lise Getoor
Department of Computer Science and Engineering
University of California Santa Cruz
Ph.D. Thesis: *Practical SRL*

M.S. Advisor. Alex Dekhtyar
Department of Computer Science and Engineering
California Polytechnic State University San Luis Obispo
M.S. Thesis: *SPOONS: Netflix Outage Detection Using Microtext Classification*