

Samuel Showalter

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Education

University of California Irvine

PHD IN COMPUTER SCIENCE

- **Advisor:** Padhraic Smyth

Sep. 2020 - Present

University of California Irvine

M.S. IN COMPUTER SCIENCE

- Completed en-route to a PhD; research-track, focus on robust machine learning

Sep. 2020 - June 2022

GPA: 3.97

DePauw University

B.A. IN MATH & B.A. IN ECONOMICS

- **Math Advisor:** Zhixin Wu; **Economics Advisor:** Humberto Barreto

Aug. 2014 - May. 2018

GPA: 4.00

Experience

RESEARCH

Amazon Science

APPLIED SCIENTIST: PERSONALIZATION

- Re-designed Amazon's core feed ranking model for high-engagement shop-by-interest
- Implemented five state-of-the-art multi-task learning algorithms with MultiRec: 🔗.
- MultiRec outperformed baselines by **10+%** over multiple metrics. Presentation: 🔗.
- Published multi-task learning paper in Amazon's internal machine learning conference

Irvine, CA

Jun. 2022 - Sep. 2022

SRI International

MACHINE LEARNING RESEARCHER

- Researcher with Stanford Research Institute's Competency-aware ML (CAML) team; proposed and built CAMELeon, a RL competency toolkit
- Presented findings highlighting RL failure modes to entire company as invited speaker; **open-sourced by SRI to the research community**

Menlo Park, CA

Jun. 2021 - Sep. 2021

National Institute of Standards and Technology (NIST)

QUANTUM COMPUTING RESEARCH FELLOW

- Highly selective national research fellowship (**13% acceptance**) in quantum computing
- Developed Python-based quantum state tomography software to characterize qubits

Boulder, CO

May. 2018 - Aug. 2018

TECHNICAL

West Monroe Partners

DATA SCIENCE CONSULTANT

- Lead data scientist of a NLP semantic context extraction project for **one of world's largest banks** with 20,000+ databases
- Developed end-to-end, highly-optimized ML pipeline to embed and classify database metadata with Spark, HDFS, and Airflow.
- **Co-winner (\$300k)**, WMP's Innovation Challenge: Auto-ML prototyping framework for DAG-based, composable ML experiments

Chicago, IL

Jan. - Aug. 2017 & Aug. 2018 - 2020

84.51°

DATA SCIENTIST: CUSTOM INSIGHTS

- Built outlier detection system for Kroger customer data; **saves 4 - 8 hours per dataset**

Cincinnati, OH

May. 2016 - Aug. 2016

TEACHING & MENTORSHIP

Lumiere Education

HIGH SCHOOL / COLLEGE RESEARCH ADVISOR

- Lumiere pairs PhD candidates with young, driven students across the world that are passionate about research
- Completed projects with 10 students including projects on NLP and Markov Chains, reinforcement learning, and variational inference

Remote

May. 2021 - Present

West Monroe Partners

CONTENT CREATOR AND INSTRUCTOR: MACHINE LEARNING BOOTCAMP

- Co-creator of company-wide ML bootcamp, including lecture content and assessments
- Lecturer for topics including classification, regularization, and unsupervised learning

Chicago, IL

May 2019 - Dec. 2019

DePauw University (DPU)

TEACHING ASSISTANT: DATA SCIENCE (CS 370)

- Chosen as TA for first-ever Data Science course at DPU because of my experience in field
- Held weekly office hours, advised student projects, and curated homework assignments

Greencastle, IN

Jan. 2018 - May 2018

DePauw University (DPU)

STUDENT CAREER ADVISOR AND TUTOR

- Staffed by McDermond Center for Entrepreneurship to assist students in job search
- Reviewed resumes, ran mock interviews, and tutored students in calculus and statistics

Greencastle, IN

Aug. 2015 - May 2017

Cloverdale Elementary School

ELEMENTARY SCHOOL TUTOR: MATHEMATICS

- Tutored 2nd and 3rd grade students in basic math as part of STEM after-school program

Greencastle, IN

Aug. 2014 - May 2016

Publications

* Denotes equal contribution


CONFERENCE

1. Alex Boyd*, **Sam Showalter***, Stephan Mandt, Padhraic Smyth. *Predictive Querying For Autoregressive Neural Sequence Models*. Neural Information Processing Systems (NeurIPS), 2022.

JOURNAL

1. Berque D., Chiba H., Hashizume A., Kurosu M. and **Showalter S.** *Cuteness in Japanese Design: Investigating perceptions of Kawaii among American College Students*, Applied Human Factors and Ergonomics, July 2018, Springer.

PREPRINT

1. **Showalter, S.**, Robles E., Seshadri, P. *Reframing Crisis Information Extraction as a Lexically Invariant Sequence Tagging Objective with Twitter Data*. Preprint , 2021.
2. **Showalter, S.** and Wu Z. *Minimizing the Societal Cost of Credit Card Fraud with Limited and Imbalanced Data*, [arXiv:1909.01486](https://arxiv.org/abs/1909.01486), 2019.
3. **Showalter, S.** and Gropp J. *Validating Weak-form Market Efficiency in U.S. Securities with Trend Deterministic Price Data and Machine Learning*, [arXiv:1909.05151](https://arxiv.org/abs/1909.05151), 2019.

Honors & Awards

UNIVERSITY OF CALIFORNIA, IRVINE

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| 2022 | NSF Graduate Research Fellowship , National, selective (~ 10%) PhD fellowship; 3 years of full funding | United States |
| 2021 | Hasso-Plattner Institute PhD Fellowship (declined) , PhD fellowship for human-safe, robust ML | Potsdam, Germany |
| 2020 | UCI ICS Dean's Award , First-year grant of \$10,000 for PhD students with outstanding research potential | Irvine, CA |

WEST MONROE PARTNERS

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| 2019 | West Monroe Innovation Challenge , Co-winner of \$300,000 to build consulting-centric autoML prototype | Chicago, IL |
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DEPAUW UNIVERSITY

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| May 2018 | H.E.H. Greenleaf Mathematics Award , DePauw Univ. most outstanding mathematics graduate | Greencastle, IN |
| May 2018 | Frank T. Carlton Economics Award , DePauw Univ. most outstanding economics graduate | Greencastle, IN |
| Apr. 2018 | Prindle Technology Prize , DePauw Univ. award for outstanding research project on technology and ethics | Greencastle, IN |
| Apr. 2018 | NIST Fellowship , Selective (~ 13%) research fellowship with Natl. Institute of Standards and Technology | Boulder, CO |
| May 2018 | Randal L. Wilson Economics Award , Annually given to DePauw's most outstanding junior economics major | Greencastle, IN |
| May 2014 | Edward Rector Scholarship , DePauw University merit scholarship; full tuition and fees for 4 years | Greencastle, IN |

Organizations

DePauw Data Science Group (DPU DS)

FOUNDER AND PRESIDENT

- Created and led 30+ student data science, machine learning, and AI campus group 
- **3rd place** in St. Mary's College Data Science Hackathon in 2018, **1st place** in 2019

Greencastle, IN

Sep. 2013 - Jun. 2017

DePauw Investment Group

CTO AND CO-PRESIDENT (4-YEAR MEMBER)

- **Managed \$170,000** of university endowment funding as well as trades and risk analysis
- Assisted in funding pitch to alumni donors that was **accepted in 2019 for \$1 million**

Greencastle, IN

Aug. 2017 - May. 2018

DePauw Civic Fellows Program

TREASURER (4-YEAR MEMBER)

- 4-year selective civic fellowship focused on outreach in greater Putnam County, IN
- Volunteered with elementary schools, museums, and community clean-up for 50+ hours a semester

Greencastle, IN

Aug. 2017 - Jan. 2018

DePauw Management Fellows Program

MEMBER

- Selective management and entrepreneurship group with required courses, events, and mandatory internship
- Attended over 100 hours of extracurricular management/entrepreneurship seminars and events per year

Greencastle, IN

Aug. 2014 - May. 2018

Skills

DevOps AWS, Docker, Git, SageMaker, GCP, Airflow, HDFS, Spark, Databricks

Machine Learning PyTorch, Tensorflow, Scikit-learn, NumPy, Pandas, CUDA, RLlib, OpenCV, Detectron2

Programming Python, Java, C++, SQL, R, LaTeX, Node.js, HTML, CSS

Presentations

MultiRec: Multi-task learning for high-engagement recommendation and feed ranking 🔗

AMAZON SCIENCE INTERNSHIP FINAL PRESENTATION

Irvine, CA

Sep. 2022

CAMeLeon: A reinforcement learning competency-awareness research package 🔗

SRI INTERNATIONAL INTERNSHIP FINAL PRESENTATION

Menlo Park, CA

Sep. 2021