Samuel **Showalter**

✉ showalte [at] uci [dot] edu | 🏠 www.samshowalter.github.io | 🐙 SamShowalter | 💼 samuelrshowalter

Education

University of California Irvine *Sep. 2020 - Present*

PHD IN COMPUTER SCIENCE
- **Advisor**: Padhraic Smyth

University of California Irvine *Sep. 2020 - June 2022*

M.S. IN COMPUTER SCIENCE *GPA: 3.97*
- Completed en-route to a PhD; research-track, focus on robust machine learning

DePauw University *Aug. 2014 - May. 2018*

B.A. IN MATHEMATICS & B.A. IN ECONOMICS *GPA: 4.00*
- **Mathematics Advisor**: Zhixin Wu; **Economics Advisor**: Humberto Barreto

Publications

* Denotes equal contribution

CONFERENCE

1. Boyd A*, **Showalter S***, Mandt S, Smyth P. *Predictive Querying For Autoregressive Neural Sequence Models.* Neural Information Processing Systems **(Oral)**, 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, 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, 2019.

Experience

RESEARCH

Amazon Science *Irvine, CA*

APPLIED SCIENTIST: PERSONALIZATION *Jun. 2022 - Sep. 2022*
- 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

SRI International *Menlo Park, CA*

MACHINE LEARNING RESEARCHER *Jun. 2021 - Sep. 2021*
- 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**

National Institute of Standards and Technology (NIST) *Boulder, CO*

QUANTUM COMPUTING RESEARCH FELLOW *May. 2018 - Aug. 2018*
- Highly selective national research fellowship (**13% acceptance**) in quantum computing
- Developed Python-based quantum state tomography software to characterize qubits

TECHNICAL

West Monroe Partners   *Chicago, IL*
DATA SCIENCE CONSULTANT   *Jan. - Aug. 2017 & Aug. 2018 - 2020*
- 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

84.51°   *Cincinnati, OH*
DATA SCIENTIST: CUSTOM INSIGHTS   *May. 2016 - Aug. 2016*
- Built outlier detection system for Kroger customer data; **saves 4 - 8 hours per dataset**

TEACHING & MENTORSHIP

Lumiere Education   *Remote*
HIGH SCHOOL / COLLEGE RESEARCH ADVISOR   *May. 2021 - Present*
- 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

West Monroe Partners   *Chicago, IL*
CONTENT CREATOR AND INSTRUCTOR: MACHINE LEARNING BOOTCAMP   *May 2019 - Dec. 2019*
- Co-creator of company-wide ML bootcamp, including lecture content and assessments
- Lecturer for topics including classification, regularization, and unsupervised learning

DePauw University (DPU)   *Greencastle, IN*
TEACHING ASSISTANT: DATA SCIENCE (CS 370)   *Jan. 2018 - May 2018*
- 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

DePauw University (DPU)   *Greencastle, IN*
STUDENT CAREER ADVISOR AND TUTOR   *Aug. 2015 - May 2017*
- Staffed by McDermond Center for Entrepreneurship to assist students in job search
- Reviewed resumes, ran mock interviews, and tutored students in calculus and statistics

Cloverdale Elementary School   *Greencastle, IN*
ELEMENTARY SCHOOL TUTOR: MATHEMATICS   *Aug. 2014 - May 2016*
- Tutored 2nd and 3rd grade students in basic math as part of STEM after-school program

Honors & Awards

UNIVERSITY OF CALIFORNIA, IRVINE

2022	**NSF Graduate Research Fellowship**, National, selective ($\sim 10\%$) 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

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

DEPAUW UNIVERSITY

May 2018	**H.E.H. Greenleaf Mathematics Award**, DePauw University's most outstanding mathematics graduate	*Greencastle, IN*
May 2018	**Frank T. Carlton Economics Award**, DePauw University's 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 ($\sim 13\%$) 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)

Greencastle, IN

FOUNDER AND PRESIDENT

Sep. 2013 - Jun. 2017

- 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

DePauw Investment Group

Greencastle, IN

CTO AND CO-PRESIDENT (4-YEAR MEMBER)

Aug. 2017 - May. 2018

- **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**

DePauw Civic Fellows Program

Greencastle, IN

TREASURER (4-YEAR MEMBER)

Aug. 2017 - Jan. 2018

- 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

DePauw Management Fellows Program

Greencastle, IN

MEMBER

Aug. 2014 - May. 2018

- 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

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 🔗

Irvine, CA

AMAZON SCIENCE INTERNSHIP FINAL PRESENTATION

Sep. 2022

CAMeLeon: A reinforcement learning competency-awareness research package 🔗

Menlo Park, CA

SRI INTERNATIONAL INTERNSHIP FINAL PRESENTATION

Sep. 2021