

# Samuel Showalter

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samshowalter.github.io

SamShowalter

in samuelrshowalter

## EDUCATION

PhD Student

**UNIVERSITY OF CA, IRVINE**

Computer Science, ML & AI

Advisor: Dr. Padhraic Smyth

Aug 2020 - Present

BA in Mathematics

BA in Economics

**DEPAUW UNIVERSITY**

Computer Science Minor

Cum. GPA: 4.00 / 4.00

Aug 2014 - May 2018

## SKILLS

### PROGRAMMING

Languages

Python

R

SQL

Java

C++

Javascript

Scala

Distributed Computing

Spark

CUDA

SparkML

Machine Learning Libraries

Tensorflow

PyTorch

Scikit-Learn

OpenCV

Numpy

Pandas

Natural Language:

SpaCy

NLTK

TextBlob

Gensim

CoreNLP

## AWARDS

**Edward Rector Scholarship**

DePauw's full-ride merit scholarship; one of 12

**Prindle Technology Prize<sup>1</sup>**

Most outstanding ethical research project

**Frank T. Carlton Award<sup>2</sup>**

Awarded to the outstanding senior economics major

**H.E.H. Greenleaf Award**

Awarded to the outstanding Senior mathematics major

**Randal L. Wilson Award**

Junior who "has contributed most to field of economics"

## EXPERIENCE

Data Science Experienced Consultant

**WEST MONROE PARTNERS** Aug 2018 - Aug 2020

Chicago, IL

- Lead data scientist, NLP semantic context extraction for one of world's largest banks
- Developed end-to-end ML pipeline; DAG framework; extracted semantic context from huge 20,000+ databases and filestores; Luigi, Airflow orchestration; NLP disambiguation
- Co-winner (\$300k), WMP's innovation challenge: auto-ml rapid-prototyping framework

Quantum Computing Research Fellow

**NIST**

May 2018 - Aug. 2018

Boulder, CO

- Highly selective national research fellowship, optimization, ML, and quantum computing
- Developed Python-based quantum state tomography software to characterize qubits

Data Scientist, Custom Insights

**84.51°**

May 2016 - Aug. 2016

Cincinnati, OH

- Created diagnostic 2,000 line SQL outlier detection system to screen data for executional issues; saves analysts approximately 4 - 8 hours per test with issue

## RESEARCH

Minimizing Societal Cost of Credit Card Fraud with Machine Learning<sup>1</sup>

**DEPAUW UNIVERSITY**

Jan. 2018 - May 2018

Greencastle, IN

- Presented at RHIT mathematics conference and DePauw University Poster Session
- Developed AI platform to minimize cost of fraud in real dollars with Machine Learning
- Explored cost optimization with ensembles, genetic algorithms, custom objective function

Validating Weak-form Stock Market Efficiency with Machine Learning<sup>2</sup>

**DEPAUW UNIVERSITY**

Jan. 2018 - May 2018

Greencastle, IN

- Investigated weak-form efficient market hypothesis with ML-driven trading platform

## LEADERSHIP

Founder & President

**DPU DATA SCIENCE GROUP**

Apr. 2017 - May 2018

Greencastle, IN

- Created and led 30+ student led Data Science, Machine Learning and AI group
- 3<sup>rd</sup> place in St. Mary's College Data Science Hackathon in 2018, 1<sup>st</sup> place in 2019

CTO & Co-President

**DPU INVESTMENT GROUP**

Apr. 2017 - May 2018

Greencastle, IN

- Managed \$170,000 of University endowment funding; oversaw trades and risk analysis
- Coordinated pitch to alumni donors that eventually was funded (2019) for \$1 million

## PUBLICATIONS

- Showalter, S. and Wu Z. **Minimizing the Societal Cost of Credit Card Fraud with Limited and Imbalanced Data**, arXiv:1909.01486, 2019.
- 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.
- Berque D., Chiba H., Hashizume A., Kurosu M. and Showalter S. **Cuteness in Japanese Design: Investigating perceptions of Kawaii among American College Students**, Proceedings of the 9th International Conference on Applied Human Factors and Ergonomics, July 2018, Orlando, Florida, Springer.