Samuel Showalter

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EDUCATION

DEPAUW UNIVERSITY
BA in Mathematics
BA in Economics
Computer Science Minor
College of Liberal Arts
Cum. GPA: 4.00 / 4.00

HOMESTEAD HIGH SCHOOL
Grad. May 2014
Fort Wayne, IN

LINKS

Portfolio:// samshowalter
LinkedIn:// samuelrshowalter
GitHub:// samshowalter

COURSEWORK

UNDERGRADUATE
Data Mining (TA)
Artificial Intelligence
Computational Statistics
Regressions/Simulations
Object Oriented Prog.
Data Structures
Financial Engineering
Financial Mathematics
Probability Theory
Game Theory
Corporate Finance
Financial Accounting

ABROAD
China (Jan. 2015)
Ecuador (Jan. 2016)

SKILLS

PROGRAMMING
Professional Experience:
Python • R • SQL • Git

Working Proficiency:
Java • C++ • LaTeX • ETL

Machine Learning:
Tensorflow • PyTorch • MXNet
• Sklearn • OpenCV • GluonCV

Distributed Computing:
Spark • SparkML • Hive

Natural Language:
SpaCy • NLTK • TextBlob •
Gensim • CoreNLP

EXPERIENCE

WEST MONROE PARTNERS | Data Science Consultant
February 2017 – Aug 2017, Aug 2018 - Present | Chicago, IL
- Lead data scientist for JP Morgan Chase data privacy classification initiative (6 months)
- Developed end-to-end ML pipeline; DAG framework; extracted semantic context from metadata; visualization with Luigi; flexible modeling; continuous learning and feedback
- Automated customer segmentation analysis for multiple clients; python Flask application
- Youngest member of leadership building Data Science training course for new employees.
- Advise, assess, and teach billion dollar organizations about Machine Learning and AI

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
Quantum Computing Research Fellow
May 2018 – Aug. 2018 | Boulder, CO
- Highly selective research fellowship given to approximately 20 students nationally
- Developed Python-based quantum state tomography software to characterize qubits
- Custom built entire package, including ML and gradient-based optimization algorithms
- Presented to 40 person research cohort and coordinated with Computer Science PhD students to parallelize solution. Will be included in future publication.

84.51° | Data Scientist, Custom Insights
May 2016 – August 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
- Programmatically evaluated the fiscal viability of strategic recommendations for Kroger
- Program to be converted into PL/SQL and integrated across the company

LEADERSHIP

DPU DATA SCIENCE GROUP | Founder & President (Apr. 2017 - May 2018)
April 2017 – May 2018 | Greencastle, IN
- Created and led 30+ student led Data Science and Artificial Intelligence group
- St. Mary's College Data Science Hackathon 3rd place in 2018, 1st place in 2019
- Gathered leadership team; coordinated speaker visits; developed 10+ projects.
- Connected Trello, Github, and Slack functionality for Agile framework development
- Members have received internships with Google, Uber, Amazon, and other tech firms

DEPAUW INVESTMENT GROUP | CTO, President (Feb. 2017 - May 2018)
August 2014 – May 2018 | Greencastle, IN
- Managed $170,000 of University endowment funding; manage website and portfolio data
- Coordinated restructure of group to operate as asset management firm in fall 2017
- Oversaw 7 sector coverage groups and integrated coverage reports into fund briefings

CIVIC FELLOWS PROGRAM | Treasurer (May 2016 - Dec. 2016)
August 2014 – May 2018 | Greencastle, IN
- Managed a $2500+ budget; allocated to large charity events including Service Plunge
- Coordinated large (100+ student) events around campus (30+ hours of service/semester)
- Selected as 1 of 7 to join elite civic service and advocacy organization (4 year commitment)

MANAGEMENT FELLOWS | Leadership Council (Aug. 2014 - May 2015)
August 2014 – May 2018 | Greencastle, IN
- Elected position; represented class of 50+ fellows interacting with program leadership
- Selective program with a core curriculum, lecture series, and semester long internship

MODELING

Supervised Algorithms:
Random Forest
Gradient Boosted Trees
Bayesian Inference
Analogizers (KNN, SVM...)
Logistic Inference
Genetic Algo. Optimization

Unsupervised Algorithms:
K-means Clustering
Hierarchical Clustering
Recommender Systems

Deep Learning:
Convolutional Networks
Object Localization
Gen. Adversarial Networks
LSTM Networks
Neuro-evolution

Financial Engineering:
Efficient Frontier
Hedging (Beta, Delta)

CERTIFICATIONS

SOA Actuarial Exam P
SOA Actuarial Exam FM

TEST SCORES

GRE | 330
- Quant: 167
- Reading: 163
- Writing: 6/6

SAT | 2220
- Quant: 800
- Reading: 710
- Writing: 710

SOCIETIES

Phi Beta Kappa
Omicron Delta Epsilon

RESEARCH

DEPAUW UNIVERSITY | MATHEMATICS
Jan. 2018 – May 2018 | Greencastle, IN
- Winner of Prindle Technology Prize for best paper and ethics-based implementation
- Presented at RHIT mathematics conference and DePauw University Poster Session
- Developed AI platform to minimize societal cost of fraud with limited and imbalanced data
- Utilized platform to assess methods for optimizing models to minimize cost in real dollars

DEPAUW UNIVERSITY | ECONOMICS
Jan. 2018 – May 2018 | Greencastle, IN
- Investigated weak-form efficient market hypothesis with AI-driven trading platform
- Addressed noted discrepancies in Economic and Data Science Efficient Market findings
- Compared machine learning findings with traditional ADF and Variance Ratio tests
- Won the Frank T. Carlton Economics Award for outstanding senior economics research

PURDUE UNIVERSITY | CHEMISTRY
May 2015 – August 2015 | Lafayette, IN
- Visiting researcher in Dr. Suzanne Bart's lab group, summer of 2013, 2014, and 2015
- Specialized in coordinating ligands to Iridium complexes for stabilization purposes
- Stabilized a Rhodium complex with a tridentate amine ligand; generated a crystal

INVOLVEMENT

DEPAUW IB WORKSHOP May 2016 – Dec. 2016 | Greencastle, IN
- Selective program dedicated to placing driven students in top investment banking firms
- Visited and interviewed with five large investment banks; completed mock workshops and interviews

PUBLICATIONS

Showalter, S. and Wu Z. Minimizing the Societal Cost of Credit Card Fraud with Limited and Imbalanced Data, Preprint Submitted to Expert Systems with Applications, 2019.

Showalter, S. and Gropp J. Validating Weak Form Market Efficiency in American Stock Markets with Trend Deterministic Price Data and Machine Learning, Preprint Submitted to the Journal of Finance and Data Science, 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.

AWARDS

Edward Rector Scholarship: DePauw's pre-eminent merit scholarship; one of 12; full tuition
Randal L. Wilson Award: Awarded to Junior who "has contributed most to field of economics"
Frank T. Carlton Award: Awarded to the outstanding senior economics major
H.E.H. Greenleaf Award: Awarded to the outstanding senior mathematics major
Prindle Technology Prize: Student who develops innovative research related to ethics