

Sam M. Swain

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EDUCATION

Northwestern University: McCormick School of Engineering

Evanston, IL

Master of Science in Analytics

Jun. 2022 – Dec. 2023 (Expected)

- **Expected Coursework:** Analytics for Big Data (Spark, Hadoop, Hive, MapReduce), Analytics Value Chain (Docker, AWS, Flask), Data Warehousing and Management (SQL, NoSQL, Neo4j/Cypher)

University of Illinois at Urbana-Champaign: College of Liberal Arts and Sciences

Champaign, IL

Bachelor of Science in Statistics and Economics

Aug. 2017 – May 2021

- **GPA:** 3.69/4.0
- **Relevant Coursework:** Machine Learning, Data Science, Probability Theory, Econometrics, A/B Testing

SKILLS

- Languages: Python (Pandas, Scikit-Learn), R (MASS, Dplyr), Java*, JavaScript*, CSS*, HTML, LaTeX
 - Database Management & Data Visualization: SQL, NoSQL*, D3.js*, Tableau*
 - Tools: GitHub, Excel, MS Suite, Adobe Suite
- * To be expected by summer 2023

PROJECTS

Analysis of Ambient Factors on Power Plant Performance

Oct. 2020 – Dec. 2020

- Analyzed the effects of temperature, ambient pressure, relative humidity, and exhaust vacuum on power plant performance
- Built a random forest model that achieved 92% accuracy when predicting if power plant output would be high or low on any given day

Grade Distribution App

Oct. 2020 – Dec. 2020

- Created app using Python, Dash, Pandas, HTML, and Plotly that allows a user to search and display grade distributions by course of the over 15,000 instructors who teach/taught at University of Illinois Urbana-Champaign

RELEVANT EXPERIENCE

Interim HealthCare of Downstate Illinois

Peoria, IL

Analyst Intern

May 2022 – Sep. 2022

- Analyzed weekly trends to help clarify hiring needs and smooth employee retention
- Created an 81% accurate XGBoost model to predict whether a new client will be over or under 40% gross margin
- Examined revenue data to help capture clients with under 13 hours of weekly need (2000 plus hours of service)

Ethereum Mining

Apr. 2021 – Sep. 2022

- Increased hash rate by 15% through tuning for optimal performance of mining rig

Python in Data Science Course Assistant (STAT 430)

Champaign, IL

Course Assistant

Jan. 2021 – May 2021

- Held office hours to assist students with homework and labs (Python, Pandas, NumPy, Matplotlib)
- Tested homework to ensure no errors were present
- Answered student's questions on homework/labs via class forum

LEADERSHIP EXPERIENCE

Illini Esports

Champaign, IL

Competitive & Community Coordinator

Sep. 2018 – May 2021

- Founded, governed and coached multiple competitive Fortnite teams to compete in collegiate tournaments and won over \$13,000 in prize money
- Created social events for the Illini Esports Fortnite community that helped attract over 30 new members