

SCOTT TURRO

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EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Science in Statistics. Minor in Physics, Mathematics, and Computer Science

Expected Graduation: May 2022

GPA: 3.7/4.0

PROFESSIONAL EXPERIENCE

Magnetar Capital

Part-Time Analyst

Evanston, IL

March 2021 – Present

- Streamlined the process of collecting portfolio data from external and internal SQL databases using pandas
- Visualized the contents of portfolios in an Excel dashboard so senior analysts could evaluate the investment
- Ported an Excel model into Python that calculates the internal rate of return of Collateralized Debt Obligations
- Collaborated with a cross functional team to retrieve the cash flow of the individual loans
- Automated the calculation and storage of financial earnings using the pro forma method to run every night

Kwiat Research Group

Undergraduate Researcher

Urbana, IL

November 2018 – August 2021

- Independently redesigned Python code that uses MLE to reconstruct quantum states from measurement data
- Automated the testing of several settings which account for experimental errors
- Published the package on PyPI, providing access to over a thousand Python developers
- Envisioned, purposed, and produced a documentation site and lead a new team member to help with the project
- Investigated Bayesian MCMC methods with a doctoral student to improve the algorithm for small data scenarios

Qubitekk, Inc

Research and Development Intern

Remote

May 2021 – August 2021

- Created a numerical method to find the optimal settings for a laser with 97.75% less measurements than before
- Translated a mathematical algorithm into python that aligns an optical system based on output measurement data
- Simulated the devices to back test the software due to limited access to the devices
- Searched for inefficiencies by visualizing performance vs settings using ggplot2 in R and Matplotlib in Python

ACTIVITIES AND AWARDS

Q-Munity Hack-Q-Thon - 1st Place Individual

May 2021

- Employed quantum algorithms for portfolio construction and optimization

JP Morgan's Code for Good Hackathon – 1st Team Place Team

Sep 2020

BPA Fundamentals of SQL– 2nd Place Individual

Feb 2018

US Congressional App Contest – 1st Place Individual

Jan 2018

- Programmed a Java app to simulate a Waterful Ring Toss game on the iPhone using a custom physics engine
- Demonstrated the incorporation of hydrodynamic drag and gyroscope sensing to congressman on Capitol Hill

PROJECTS

Classification of Covid-19 Chest X-Rays

Fall 2021

- Used convolutional neural network in PyTorch features of covid-19 in chest x-rays with 90% accuracy

Honors Individual Study

Fall 2021

- Utilized gibbs sampling and latent class variables in a team to cluster students based on their test performance
- Used Monte Carlo Simulations to analyze the accuracy of the python algorithm

Effective Roles in the 2013 NBA Season

Fall 2021

- Used cluster analysis on NBA players to showcase 2 different playing styles and 3 different levels of skill
- Analyzed the makeup of different teams and made suggestions for what types of players to pick up in the draft

Default of Loans from the Small Business Administration

Spring 2021

- Worked with 4 students to analyze the impact of location, the recession, and job retention on loan default rates

SKILLS AND INTERESTS

- Data Science:** R || LaTeX || Markdown || Excel || Jupyter || Colab || Pandas || Neural Networks || Optimization
- Numerical Analysis:** Curve Fitting || GLM || Clustering || Bayesian Inference || Monte Carlo Simulation
- Business Techniques:** Word || PowerPoint || Problem Solving || Project Management || Documentation