

Isabella Xinyi Qiao

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EDUCATION

University of Michigan - Ann Arbor

BS Computer Science, Data Science

Ann Arbor, MI

September 2018 – May 2022

- GPA: 3.97/4.00, EECS Scholar, James B. Angell Scholar, University Honors
- Coursework: Algorithms, Data Structures, Web Systems, Database Management Systems, Computer Organizations, Foundations of Computer Science, Data Mining & Statistical Learning, Applied Regression Analysis, Statistical Computing
- Programming Languages: C/C++, Python, Java, JavaScript, HTML/CSS, SQL, Bash, R, LaTeX, VBA
- Tools: React, Flask, Click, Scikit-Learn, Hadoop, MapReduce, Git, Docker, Travis-CI, MongoDB, Oracle, SQLite, JDBC

EXPERIENCE

Goldman Sachs

Incoming Engineering Summer Analyst – Software Engineer

New York, NY

Starting June 2021

College of Engineering, University of Michigan

Instructional Aide, EECS 376: Foundations of Computer Science

Ann Arbor, MI

January 2021 – Present

- Teaching weekly discussion section on topics of algorithm design and analysis, models of computation, decidable and undecidable problems, computational complexity, and cryptography to bolster students' understanding of course materials
- Holding office hours to review course materials and answer student questions; writing homework and exam questions

Department of Statistics, University of Michigan

Software Developer

Ann Arbor, MI

December 2020 – January 2021

- Redesigned and upgraded the codebase of an autograder primarily written in python which stores and grades student R scripts in STATS 415 - Data Mining and Statistical Learning
- Created tests package and implemented unit tests and integration tests, reduced breaking code and fixed bugs on legacy code
- Implemented an error alert feature using Gmail API to detect unexpected exceptions

Alvarez & Marsal

Data Science Intern, Valuation Services

Houston, TX

May 2020 – August 2020

- Developed a python application to assist in the valuation of complex financial instruments; packaged with python unittest testing setup and integration with Docker, Travis CI, and Tox; logged errors and handled problematic input
- Developed a machine learning application to forecast loan loss reserves and provided estimation of loss reserves on a portfolio of 130,000 loans to assist client with its financial reporting requirements
- Built a dynamic visualization tool on market and fundamental data and created command line interface using Click
- Fine tuned grid search parameters for a variety of regressor and classifiers and created feature visualizations through various dimensionality reduction techniques to enhance A&M machine learning platform

PROJECTS & ACTIVITIES

Undergraduate Research in Statistics, University of Michigan

Undergraduate Researcher

Ann Arbor, MI

December 2019 – May 2020

- Trained various generalized linear models and used other data mining techniques to predict students' likely post-secondary educational attainments on the basis of various high school characteristics with test MSE error 0.004
- Used mixed model with school district as a random effect to construct indices and produced 574 unique ranks comparing post-secondary educational outcomes of different districts to support subsequent analysis evaluating curricula in Michigan
- Developed a reproducible program in R that fits the model and generates key model diagnostics

Goldman Sachs Engineering Essentials Program

Fellow

New York, NY

June 2020 – August 2020

- Led a team of five in Goldman Sachs Hackathon to explore COVID 19 datasets and assisted them with setting up Jupyter Notebook and various python packages for data wrangling and model building
- Used time-series regression to forecast total US cases and built a simulation of the spread of an epidemic

Academic Success Program - Michigan Athletics

Academic Tutor

Ann Arbor, MI

January 2020 – April 2020

- Provided instruction to student athletes for Computer Science courses and improved students' understanding of programming concepts and data structures

ADDITIONAL

- Girls Who Invest, Online Intensive Program Scholar
- Sigma Eta Pi Professional Entrepreneurship Fraternity, Recruitment Coordinator
- Kol Hakavod A Cappella Group, Treasurer, Concert Manager, Soprano

March 2020 – May 2020

January 2019 – Present

September 2018 – Present