

WORK EXPERIENCE

QUANDL - NASDAQ

Data Engineer

Toronto
Sept. 2019 to Current

- Automated the data preprocessing pipeline using PySpark and Amazon S3 to identify schematic errors, detect missing join keys, and compute aggregate statistics
- Parsed millions of FIX messages to generate a global securities mapping using SQL
- Conducted time series analysis to eliminate noise and whitelist entities for inclusion in data products
- Implemented an ETL pipeline for tracking IPOs that used a fuzzy matching model written in Python and SQL
- Developed Python scripts to retrieve and analyze financial data from Thomson Reuters Eikon for 200+ tickers used to run revenue correlations against internal data products

UNIVERSITY OF WATERLOO

CS 234 Tutor

Waterloo
May 2020 to Aug. 2020

- Provided private tutoring and homework assistance on a weekly basis for CS234: Data Types and Structures
- Material coverage included implementation, analysis, and usage for trees, graphs, stacks, and other common ADTs

FEDERAL DEVELOPMENT ONTARIO

Application Developer

Waterloo
Sept. 2018 to Dec. 2018

- Designed and developed the departmental document management interface to localize GCDocs (OpenText Content Server) and Microsoft Sharepoint functionalities using React.js and TypeScript
- Employed an internal API to create form scripts in TypeScript that contain event handlers for 40+ Microsoft Dynamics CRM entities released in production
- Implemented the TypeScript Conversion solution which involved refactoring the codebase to be asynchronous

TREASURY BOARD SECRETARIAT

Project Support (Data Analytics)

Ottawa
May 2018 to Aug. 2018

- Developed facet grid and animated network visualizations in R for various datasets including the Public Service Employee Survey and Departmental Innovation Survey
- Assisted in conducting interviews, performed quality assurance and produced ad hoc compliance reports for senior management during the Audit of Privacy Practices

PROJECTS

VIZSORT

github.com/fljiang/VizSort

- Developed a JavaScript web-application using React-Vis that generates bar graphs to visualize sorting algorithms
- Manipulated graph data and colour scheme using Redux to denote individual accesses and operations

3 LITTLE PIGS

github.com/MelodyCheng99/3LittlePigs

- Implemented a JavaScript web-application adaptation of the 7Wonders board game using React.js and Redux
- Features included multiplayer gameplay, custom card and icon designs

SKILLS

PROGRAMMING LANGUAGES: Python, C, C++, Java, HTML, CSS, Javascript/Typescript, SQL, R, MatLab

DEV TOOLS: Git/TFS, AWS, Node.js, React.js, Redux, Apache Spark, DataGrip, Microsoft Dynamics CRM

EDUCATION

University of Waterloo

Sept. 2016 to Current

BMath - Statistics and Computational Mathematics (Computing Technology Option)

Computer Science courses completed: Elementary Algorithm Design and Data Abstraction - Logic and Computation - Object Oriented Programming - Introduction to Computers and Computer Systems - Data Types and Structures