Ziyue Yang

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Technical Skills

Programming Python · Java · C++ · SQL · JavaScript · Swift
Data Science R · Pandas · TensorFlow · Scikit-learn · Keras
Web Tech Django · React · REST · MongoDB · Bootstrap
Other Git · Heroku · Android Studio · Xcode

Experience

Bigtheta
Project Lead (Remote) Toronto, ON (May 2020 - June 2020)

- Led upcoming second-year students with computer science backgrounds to create a Django-based project.
- Presented introductory software development tools and design principles (e.g. OOP programming principles).
- Demonstrated full-stack development process: front-end and back-end development; SQLite data querying.

Cohesion
iOS Developer Intern Guangzhou, Guangdong, China (Summer 2018)

- Contributed to the Swift development of Cohesion's iOS app, an office reservation tool.
- Implemented React Native-based front-end features for mobile.
- Front-end testing using the Jest framework.

Technical Projects

UniMart: An Online Marketplace *https://github.com/yangzi33/unimart*

Django-based web market providing students a platform to trade items online.

- Implemented models, views, and templates to allow user registration, account profiling, and item listing.
- Styled front-end templates using Bootstrap and React.
- Queried application data with SQLite.

House Prices Prediction with Gradient Boost Classifier *https://kaggle.com/yangzi33/housepriceprediction*

Top 40% machine learning model for competition *House Prices: Advanced Regression Techniques*.

- Built prediction model using the gradient boosting technique, based on hyperparameters optimized by a randomized searching algorithm.
- Demonstrated data wrangling skills, such as Principle Component Analysis and null entries cleaning.

Agenda: Android Calendar *https://github.com/yangzi33/agenda*

Android calendar app built using Java. Agenda allows users to create and search calendar events with reminders.

- Integrated Android GUI based on open-source APIs.
- Created features that allow users to add, modify, and create repeating events with specific frequencies.
- Implemented simple SQLite relational databases for data querying, to allow multiple users.

Treemap Visualizer *https://github.com/yangzi33/Treemap-Visualizer*

File size visualizer implemented using a recursive treemap algorithm, tested with framework *unittest*.

3D Navigator *https://github.com/yangzi33/ConsoleFPV*

Dynamic first-person 3D navigator rendered in command line.

- Implemented a ray casting algorithm in C++, mapping from 2D space to 3D.

Education

University of Toronto *2018 - 2022*
Toronto, ON, Canada

- Honours Bachelor of Science
- Statistics, Computer Science, Mathematics
- Coursework: (Enriched) Data Structures and Analysis, (Enriched) Theory of Computation, Software Design, Systems Programming, Machine Learning Methods, Applied Regression Analysis, Nonlinear Optimization.

Extracurricular

Courseworks: courses that I have completed a significant portion of and enjoyed much.

- Machine Learning, Stanford University: Course that builds a solid foundation of my skills in machine learning.
- Convolutional Neural Networks for Visual Recognition, Stanford University.
- Data Management, UCI: Course on **relational databases**. Though I will be taking similar courses, starting early seemed like a better option, due to the knowledge requirements for personal projects and hackathons.

Personal Interests

- Kaggle · Snowboarding · Project Euler · 3Blue1Brown · Reading · Formula One