

Yuqing Wen

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EDUCATION

Carnegie Mellon University

Master of Science in Information Technology - Mobility; GPA: 3.9/4.0

Pittsburgh, PA

Aug. 2019 - May 2021

Sun Yat-sen University

Bachelor of Engineering - Network Engineering; GPA: 3.8/4.0

Guangzhou, China

Aug. 2015 - June 2019

EXPERIENCE

Coursera, Inc.

Software Engineer Intern

Mountain View, CA

May 2020 - Aug 2020

- Implemented new features in the frontend using React.js and TypeScript for the content authoring platform, which is heavily used by instructors authoring thousands of courses consisting of different item types on Coursera
- Improved the content viewing/editing experience on Coursera Markup Language rich text editor by rewriting block rendering method, updating user flow of file uploading, adding support to new tags, and fixing existing issues
- Wrote unit tests with Jest and end-to-end tests with Puppeteer, improved code coverage of relevant bundles

SmartLLV Lab, Sun Yat-sen University

Undergraduate Research Assistant

Guangzhou, China

Apr. 2018 - Apr. 2019

- Conducted research in Computer Vision, focused on Generative Adversarial Networks in image-to-image translation
- Proposed a model which improved Frechet Inception Distance by 5.1%, implemented it with PyTorch, built a REST API and deployed it as a web service using Flask

PROJECTS

Scotty3D - Computer Graphics, C++

Feb. 2021 - May. 2021

- Implemented interactive mesh editing, realistic path tracing, and dynamic animation for a 3D graphics software
- Designed graphics data structures such as halfedges and BVHs for efficient storage and processing, and implemented corresponding algorithms to achieve graphics operations

ETL Data Processing in Spark - Data Processing, Spark, AWS, Python

Feb. 2021 - May. 2021

- Set up an AWS EC2 cluster and built a distributed program to preprocess a web crawl dataset and generate a training dataset for LDA topic modeling using Apache Spark Python APIs
- Optimized the performance of the program for 100GB datasets and achieved top 20% in class

Geospatial Data Visualization Tool - Web App Development, Data Science, Python

Sept. 2020 - Dec. 2020

- Led a team of four to develop an interactive geospatial data visualization tool for gravity anomaly data using Plotly and Dash, sponsored by U.S. Geological Survey
- Designed and built the frontend of the application and achieved user interactions with different visualization types

Carcassonne Game - Object Oriented Design, Java

Oct. 2020 - Nov. 2020

- Developed a Carcassonne game in Java using Java Swing as GUI, and performed unit tests in JUnit
- Designed object models and software structures using object oriented design principles and various design patterns

Distributed File Caching System - Distributed Systems, Java

Feb. 2020 - Mar. 2020

- Implemented a distributed file caching system which enables remote clients to read, modify, and delete files from the server through a cache proxy via RPC calls using Java RMI
- Designed a caching protocol based on check-on-use strategy and LRU policy for correctness and performance
- Supported multiple concurrent clients by Java multi-threading and concurrency management techniques

SKILLS

- **Programming Languages:** Java, Python, JavaScript/TypeScript, C++, C, Go
- **Frameworks & Platforms:** React.js, Redux, Flux, JQuery, Django, Flask, Node.js, Express, AWS, Linux
- **Databases & Data Processing:** SQL, Hadoop, Spark, NumPy, Pandas, Matplotlib, Sklearn, PyTorch