

Yuchen (Bill) Liu

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Education

Bachelor of Science, Computer Science Major, University of British Columbia, Vancouver, BC May 2022

- Senior-level GPA: 91.1%
- Awards: Science Scholar/Dean's Honour List, Dean of Science Scholarship
- Key Classes: Advanced Relational Databases (96%), Introduction to Relational Databases (97%)

Work Experiences

Software Testing Engineer, Cvent, Vancouver, BC May 2019 – Dec 2019

- Joined an agile sprint team as a quality engineer; Participated in the testing and design of React Native App and a React Website to the time of early adopter code complete.
- Wrote web and mobile automation tests using Selenium and Appium in Java; Wrote Postman API automation tests using JavaScript; Wrote PhraseApp localization tests.
- Participated in AWS Re: Invent Hackathon; Used AWS MediaLive, FFmpeg in Python to stream videos from a drone.
- Verified storybook component designs and functions; Verified data using Couchbase.

Quality Engineer & Manufacturing Engineer, Schneider Electric, Fresno, CA, US May 2018 – Aug 2018

- Designed an automated data collection system using Excel VBA to produce manufacturing defect rate (MDR) data.
- Optimized the run time by using various data structures, such as disjointed set and list.
- Performed time study and MDR data collection on the production line; Received lean six sigma yellow belt training.
- Analyzed and processed data from SQL database; Investigated for defect root cause.

Teaching Assistant, University of British Columbia, Vancouver, BC Aug 2018 – Aug 2020

- Taught Java and OOP design patterns, C++ and C programming, data structures, and MATLAB.
- Hosted office hours to answer students' questions; Marked homework and exams; Invigilated exams; Hosted labs.

Technical Projects

TreeHole Social Media Website May 2021 – Aug 2021

- Led the team to choose the meaningful topic, set direction, efficiently delegated sprint tasks, and monitored progress leveraging strong leadership, problem-solving and communication skills.
- Used Material UI, CSS and React to implement navigation panels; Created webpages using React; Improved React component made by teammates; Optimized performance, code maintainability and memory usage.
- Created multiple REST API endpoints using Express; Connected backend to MongoDB database using mongoose.
- Adapted Firebase Authentication Rest API into our Express backend with auto logout; Improved frontend security by using user token to communicate with backend instead of user id; Improved frontend security by protecting the React routers based on authentication status.

S&P 500 Investment Visualization Website Jan 2021 – Apr 2021

- Preprocessed stock data using NumPy and Pandas in Python; Used Wikipedia API to get company info on the fly.
- Created treemap, bubble chart, line chart and basket using d3.js; Implemented d3.zoom in bubble chart.

Pandemic Tracker Website May 2020 – Jun 2020

- Used PHP, JavaScript, HTML, CSS to construct a content management system; Created user login functionality as a doctor and patient.
- Hosted MySQL database on AWS RDS; Connected PHP with MySQL database.

Technical Skills

Programming Languages

- Java, C, C++, C#, Python, JavaScript/TypeScript, HTML, CSS, PHP, Swift, VBA, MATLAB, R

Software/ Tools/ Packages/ Frameworks

- Selenium, Appium, PhraseApp, Postman, Couchbase, MySQL, MongoDB, Mongoose, AWS RDS, AWS MediaLive, AWS S3, AWS EC2, FFmpeg, Unity, NumPy, Pandas, Scikit-learn, OpenCV, d3.js, React, Nodejs, Express, Git

Communication

- Mandarin (fluent), English (fluent), Cantonese (conversational)