JONAH MULCRONE

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EDUCATION

B.A. Computer Science, B.B.A Finance   September 2019 – May 2024
Pacific Lutheran University (PLU)   *Tacoma, Wa*

- **Coursework***: Databases & Web Programming, Algorithms, Data Structures, Data Mining, Artificial Intelligence, Discrete Structures, Data Science II, Statistical Modeling, Information Systems
- **Achievements:** Department of Computer Science GPA: **3.6/4.0** | Dean's List: **6** Consecutive Semesters

SKILLS

Technologies: Typescript, Javascript, Java, Python, HTML, CSS, ReactJS, Angular, Flask, Spring Boot, Firebase, Git, Github, Docker, Cypress, JUnit, Jenkins, Jira, AWS, Scikit-Learn, NumPy, Beautiful Soup

WORK EXPERIENCE

Software Development Intern   June 2024 – Present
Pierce County IT   *Tacoma, WA*

- Transitioned CLI applications for geocoding to micro web services to improve scalability and developed JUnit tests to improve overall code coverage (***Spring Boot, Spring MVC, Groovy, JUnit, MockMvc***).
- Engineered a Groovy script that utilizes regex to automate the migration of Protractor E2E tests to Cypress E2E tests, modernizing testing capabilities (***Angular, Cypress, Groovy***).
- Expanded map tile functionality in the Pierce Application Core Library (PAC) by incorporating support through APIs like OpenLayers and ArcGIS (***Angular, Typescript, Grails***).

Software Development Engineer   August 2024 – Present
OnyxAI (startup)   *Renton, WA*

- Spearheaded the development of a real-time chatbot service which connects to an AWS Lambda through a WebSocket server (***ReactJS, Firebase Firestore, AWS Lambda, WebSocket***).
- Integrated Firebase Auth with Redux to create a user service, reducing redundant Firebase API calls by **90%** and streamlining the registration and sign-in process (***Firebase Auth, Redux***).
- Built a UUID-based navigation system for easy access to chat histories, reducing support queries on lost messages. (***Firebase Auth, React Router DOM***).

PROJECTS

Finance Tracker | *ReactJS, Flask, FlaskSQL-Alchemy, SQL,Typescript, Python, Docker, NGINX*
- Leveraged **Plaid API** to enable users to connect bank accounts and retrieve relevant data through RESTful API calls, enhancing financial management tool capabilities.
- Constructed SQL-backed ETL pipelines to handle CRUD operations, ingesting transactional data using **Flask-SQLAlchemy** to power a financial analytics dashboard.
- Developed frontend in **ReactJS** for the analytics service, creating appealing visualizations using Recharts that display financial spending behavior.

PC Part Picker | *Jinja, PostgreSQL, Flask, Python, Docker*
- Designed a dynamic Jinja-based frontend interface that allows users to filter and display PC part details.
- Engineered a scalable **Docker** environment to host a **Flask** application alongside **PostgreSQL** and PgAdmin, optimizing development workflows and enabling persistent data management via volumes
- Built a **RESTful API** , enabling seamless integration and real-time access to comprehensive PC component data, significantly enhancing user interaction.

Sorting Algorithm Visualizer | *ReactJS, Typescript, Vite, Material UI*
- Developed an application using **ReactJS** in **Typescript** to assist students in visualizing sorting algorithms.
- Implemented efficient state management and React Hooks to control the sorting process and array generation, ensuring a smooth user experience and efficient updates to the component's UI.