Xinyue (Ashley) Cao

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Technical Skills

Languages: Java, Python, HTML, CSS, JavaScript, TypeScript, C/C++, SQL, PHP,
Libraries/APIs: React/Redux, Express/Node, Mocha, Chai, JUnit, Unittest, scikit-learn, Pandas, Three.js,
Tools/System: Linux(ubuntu), Git, SVN, JIRA, Confluence, VMware, Azure Storage

Work Experience

Research Assistant Developer Volunteer (*UBC SPIN Lab***)**   **May 2024 – present**
 • Designed and implemented cohesive **Arduino C++** classes and APIs for easy translation to Blockly blocks.
 • Created Blockly blocks using **JavaScript** to allow participants to modify multiple servos without coding knowledge.
 • Deployed the interface using **Flask** and **Render** for executing observations and interviews.

Software Test Developer Co-op (*Sierra Wireless***)**   **Sep. 2022 – Apr. 2023**
 • Debugged and developed **Python** automation test scripts for VPN connection and crypto profiles of vehicle routers
 • Executed manual and automated tests; identified and documented critical bugs via **JIRA** for patch version, ensuring successful major version releases
 • Configured test servers and debugged network issues, including VPN connections and firewalls on **Linux** machines
 • Developed comprehensive technical documentation on **Confluence** and trained 5 full-time employees

Technical Projects

Renti – the Retal Matching App | *React, Redux, Express.js, MongoDB, NoSQL*   *present*
 • Developed reusable routers, side bars and input forms components using **React** and **Redux**
 • Implemented RESTful API using **Express.js** to for user authentication and profile management.
 • Created schemas and **NoSQL** queries to connect backend API to **MongoDB**
 • Collaborated in a team of 4 through **Slack** and **GitHub** to discuss app idea, component modularization and data storage strategy, filed issue tickets and wrote scrum report to maintain progress.

UBC Course Search Web App | *TypeScript, HTML, CSS, JavaScript*   **Sep. – Dec. 2023**
 • Engineered back-end API in **TypeScript** that processes data with JSON and HTML format, achieves data
 persistence on disk, and filters data by parsing user's EBNF queries
 • Constructed and tested **REST** server, implemented UI using **HTML, CSS, JavaScript**
 • Constructed comprehensive black-box and glass-box test suites using **Mocha, Chai**, **express** libraries

Zoo Management Database | *HTML, PHP, Oracle, SQL*   **Jan. – Apr. 2022**
 • Designed a relational database with 15 schemas in BCNF for managing animal demographics in a zoo
 • Established **SQL** queries to modify or retrieve information from the **Oracle** database
 • Implemented a web interface connecting to the database using **HTML** and **PHP**, triggering **SQL** queries
 • Managed project with 2 other teammates, led meetings, deadlines, and roles effectively.

Education

Faculty of Science, Computer Science Major, 4th year (GPA: 84.4%)   **Sep. 2021 – May 2025**
University of British Columbia