

Cody Zhang

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TECHNICAL SKILLS

Languages: Java, Python, SQL, JavaScript, TypeScript, C, C++, Matlab, HTML, CSS

Tools: Git, Power BI, Kubernetes, Docker, Jenkins, MySQL, Figma

Frameworks: React, Node.js, Express, Flask, Numpy, Pandas, JUnit, PyTest

Cloud Platforms: Amazon Web Services

EXPERIENCE

AI Trainer

December 2024 - Present

Outlier AI

Remote

- Trained and fine-tuned large language models to enhance chatbot response accuracy and relevance.
- Developed and implemented prompt engineering strategies to improve chatbot performance.
- Analyzed chatbot interactions, iterating on model parameters to increase engagement and response quality.

Key Achievements: Enhanced chatbot response relevance and engagement through targeted model fine-tuning.

Software Developer

September 2023 - December 2023

ServTennis

Vancouver, B.C., Canada

Developed backend services for real-time tennis match tracking, processing match data and player performance. Collaborated with frontend developers to integrate the system and optimized data handling for scalability and efficiency.

- Built scalable backend services in **Python**, supporting a high-performance analytics platform.
- Engineered PyTorch-based algorithms for real-time ball movement tracking and player motion detection.
- Optimized 10+ SQL queries, greatly improving data retrieval.
- Worked closely with a team of 5 developers, delivering enhanced analytics to 50+ clients.

Key Achievements: Improved player tracking accuracy to greater than 95%. Successfully managed datasets exceeding 1,000 records, streamlining analysis and reporting.

ENVIRONMENT: Python, SQL, Git, AWS, Flask, PyTorch.

Software Developer

May 2022 - Dec. 2022

Simon Fraser University

Burnaby, B.C., Canada

Designed and developed simulation applications for COVID-19 research, leveraging database management and UI/UX design principles to support data-driven decision-making. Built and maintained tools to model pandemic scenarios, aiding public health discussions and research efforts.

- Created and maintained **SQL** databases with over 1,000 entries, ensuring efficient data storage and retrieval for simulation analysis.
- Designed **Figma** wireframes and detailed **ERD** diagrams by gathering requirements from biweekly meetings with supervisors and researchers.
- Developed three simulation applications using **MATLAB** and **MATLAB App Designer** to model COVID-19 scenarios, providing actionable insights for public health discussions.
- Led 10+ client showcase meetings, presenting key deliverables and gathering feedback, which resulted in a 15% improvement in application usability.
- Executed over 100 unit and manual tests to ensure application reliability, identifying and resolving 95% of reported bugs before deployment.

Key Achievements: Developed simulation applications that directly supported decision-makers in Alberta, providing critical data for long-term care home policies during the COVID-19 pandemic. Additionally, the applications were used as educational tools for health science students at **Simon Fraser University (SFU)**, helping them analyze and understand pandemic modeling in real-world scenarios.

ENVIRONMENT: JavaScript, Python, GitHub, MATLAB, SQL, Figma

Equipment Manager

BC Government

July 2024 - November 2024

British Columbia, Canada

Managed and deployed election technology infrastructure, ensuring seamless operations across multiple districts. Focused on hardware setup, system configuration, and troubleshooting to maintain reliable election processes. Collaborated with cross-functional teams to optimize asset tracking, technical support, and secure data handling.

- Configured and deployed over 100 election devices, including laptops, ballot scanners, routers, and networking hardware, ensuring full operational readiness before election day.
- Performed hardware diagnostics and repairs on malfunctioning devices, minimizing downtime and ensuring consistent election operations.
- Troubleshoot real-time technical issues, including network connectivity failures and device malfunctions, to maintain stable election reporting.
- Implemented and maintained inventory tracking systems for election equipment, reducing asset misplacement incidents.
- Trained election officials on proper device handling, cybersecurity best practices, and troubleshooting procedures to ensure smooth operations.

Key Achievements: Successfully managed the deployment and maintenance of election hardware across multiple districts, ensuring 100% operational readiness. Maintained seamless IT infrastructure with minimal disruptions throughout the election period.

ENVIRONMENT: IT Infrastructure, Networking, Asset Management, Troubleshooting, Hardware Deployment, System Configuration.

PROJECTS

FiTrak | *EJS, AWS(S3, DynamoDB, Cognito, EC2), HTML/CSS, GitHub*

- Integrated various AWS services like **S3**, **DynamoDB**, **Cognito**, and **EC2** to ensure scalability, reliability and security of the application.
- Implemented user authentication and authorization using **Cognito**, enabling users to securely log in and access their fitness data.
- Developed a responsive user interface that works seamlessly across different devices and platforms.

Virtual Hospitals Africa | *TypeScript, Deno, HTML/CSS*

- Utilized Google Calendar **API** to seamlessly populate doctor's calendar with appointments made by patients, reducing scheduling errors and increasing scheduling efficiency by 75%.
- Created Doctor/Patient notifications using the Observer Design Pattern.
- Successfully integrated chatbot functionality with WeChat **API**, improving customer engagement and experience.

HomeWorkBot (MLH Hackathon) | *Python, Firebase, Pandas, GitHub*

- Developed a bot using **Python**, **Firebase** and **Pandas** that connects to Discord to automate and update homework deadlines for users.
- Utilized **Openpyxl** to format and import data from GoogleSheets, which served as the database.
- Provided a streamlined and user-friendly experience by converting data from Python to Discord using **Pandas**.

EDUCATION

British Columbia Institute of Technology

Computer Science

Vancouver, B.C.

December 2023

University of British Columbia

Bachelor of Science in Chemistry

Vancouver, B.C.

May 2020