Oliver Xie

oxie@sfu.ca • Vancouver, Canada • LinkedIn • GitHub • oliverxie.com

SKILLS

- **Languages:** Java, C#, JavaScript (React, Node.js), TypeScript, Python, HTML, CSS, SQL (SQL Server, Postgres), C
- **Platforms**: Windows, Linux, Amazon AWS, Microsoft Azure
- **Tools:** Docker, Git, NoSQL (DynamoDB, Cosmos DB), Nginx

WORK EXPERIENCE

Amazon Web Services (AWS)   **May 2022 - Aug 2022**
Software Development Engineer (Intern)   Vancouver, BC

- Defined 10+ customer-facing metrics: names, dimensions, units, resolutions, and measurements published to CloudWatch Metrics for a future application integration service in Amazon EventBridge
- Adapted internal monitoring agent to run in a sidecar container pattern for ECS/Fargate service processing 230K events per second with minimal additional latency on the service critical path
- Created a deployment pipeline for AWS accounts and IAM roles scoped for metrics upload, limiting blast radius and automatically creating resources for all stage (gamma, prod), region, and cell (sub-regional) units
- Continuously deployed code and infrastructure using AWS Cloud Development Kit (CDK) and AWS CloudFormation
- Wrote unit tests using JUnit and Mockito; improved package code coverage to 90% by testing empty input
- Fixed bugs in team Postman collections, IntelliJ run configurations, and Docker Compose, reducing development toil

Change Healthcare   **Sep 2020 - Apr 2021**
Software Development Engineer (Co-op)   Richmond, BC

- Led ASP.NET Core (C#) identity server security upgrade for all Change Healthcare Radiology Solutions instances globally, eliminating 5 major CVEs
- Refactored code to use SOLID principles while maintaining existing configuration and Couchbase database access
- Secured file upload validation for C# PACS backend while supporting various DICOM and image formats
- Ported 30+ hotfixes over a 2-week sprint to the latest version to support a large-scale customer product upgrade
- Improved security and performance in Visual C++ modules by eliminating over 50 resource leaks and unsafe pointers

PROJECTS

Project Blue   **Sep 2021 - ongoing**

- Created a state machine using Python and an image classifier using Keras to automate gameplay for a mobile game
- Made a data pipeline to retrieve and preprocess 15,000 images from local gameplay and external videos
- Trained a neural network that classifies with 95% accuracy, speeding up clear times by 50%

Pokémon Mystery Dungeon Speedrun Tracker   **Apr 2020 - Aug 2021**

- Prototyped in Django, now deployed on Azure Functions (C#) with GitHub Actions CI/CD
- Polled speedrun.com API periodically and used Cosmos DB to cache results
- Completely automated manual process (saving 2h/month), easily scaled to handle category reorganizations

BGC Coursys   **May 2020 - Aug 2020**

- Managed an agile team; solicited feature development and feedback from corporate client
- Automated employee course-scheduling using Node.js/Express and Postgres, reducing management time by 40%
- Used EJS and socket.io to show course waitlists and update enrollment in real-time
- Controlled project scope to allow on-time delivery despite losing 40% of team capacity
- Performed API testing using Mocha, Chai and Postman and UI testing using Selenium

EDUCATION

Simon Fraser University   **Sep 2019 - Apr 2023**
Bachelor of Science in Computing Science   3.84 GPA

- USES Scholarship with Distinction (full-ride tuition, estimated value $35,000+)
- CSSS Director of Events: Organized social and academic events with 200+ attendance per semester
- CS Peer Tutor: Mentored students in first and second-year computing science classes
- HIVE Leader: Served as an virtual/physical orientation facilitator and a Wayfinding Champion (tour guide)