An Qi Wu

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Technical Skills

Languages	Java, Python, C / C++, Go, Bash, SQL, Scheme (Racket), R
DevOps	Jenkins, Git, Jira, Docker, Bitbucket, Shippable
Frameworks / Tooling	gRPC, Guice, ROS, AWS, Redis, MongoDB, Cassandra, DynamoDB

Work Experience

SDE Intern | Amazon   *Sept - Dec 2019*
- Details coming soon!

Server Developer | Kik Interactive.Inc   *January - April 2019*
- Rewrote entire chat settings server, including creating a new database in **DynamoDB** and developing a service to parse and retrieve values from XML strings stored in **Cassandra**.
- Migrated over 10 key server components to a microservice architecture via **gRPC**, reducing build and deploy time from one hour to a few minutes.
- Designed and implemented APIs for Kik accounts, chats and groups in **Java** and **Go**.
- Set up **Jenkins** deployment pipelines for four microservices and deployed new EC2 instances to **AWS**.
- Wrote and refactored integration and system tests for new and existing projects.

Software Development Intern | Raven Telemetry   *May - August 2018*
- Wrote and revised **Python** scripts to automate repetitive manual tasks and to improve internal tooling, such as performing **MongoDB** CRUD operations and parsing CSV files.
- Developed new features and reduced tech-debt by refactoring code for Raven's Android app in **Java**.
- Increased mass update time from 2 days to a few hours by fixing concurrency issue with the app's downloader.
- Launched **Docker** containers with Ansible to run microservices.

Projects

Study Plus   *ConUHacks, Jan 2019*
- Created a website that allows students to find an empty classroom at the University of Waterloo.
- Used **Spring Boot** Framework and followed the **MVC** architecture.
- Retrieved data from the UWaterloo Open Data API to populate a **MySQL** database, which is deployed to a RDS instance in AWS.

Biquadris   *Nov - Dec 2018*
- Designed and implemented from scratch a 2 player Tetris game in **C++**.
- Included features like ncurses text display, a graphical interface and saving an unfinished game.

Extracurricular Activity

WATonomous - Team Lead / Core Member   *Jan 2019 - Present*
- Responsible for managing 20 core members under the Path Planning Team.
- Integrated the dynamic objects layer into the module.
- Implemented a map maker that outputs lane lines based on the vehicle's trajectory in **Python**.
- Tuned the heuristic function for finding a path using A* to better support vehicle dynamics .

Mathematics Tutorial Centre Tutor   *Sept – Dec 2018*
- Tutored and answered questions in Calculus 1 & 2, two courses taken by over 1000 students, 3h / week.
- Assessed the student's level of understanding and explained different concepts at an appropriate level.

Education

University of Waterloo
Candidate for Bachelor of Computer Science, Honours, Co-op   *(Expected) 2017 - 2021*
- GPA: 3.89 | Term Dean's Honours List | President's Scholarship (2000$)