

# Charlie Kim

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## Education

**University of Alberta** - *BSc. in Computer Science Specialization - GPA: 3.7/4.0* *Sept 2021 - April 2024*

Web/Mobile development, DevOps, Machine Learning, Operating Systems, Networks, Management Science

## Professional Experience

**Full Stack Developer** - *ABC Head Start Society* *Jan 2024 - June 2024*

- Built a full stack web platform in React & MySQL and secured it with NGINX & SSL, enabling 10,000+ users to browse & share audiobooks.
- Developed a custom driver in TypeScript to stream audiobook data into a smart pen allowing students to playback their books in numerous languages.
- Created a comprehensive stress & fault testing framework using SonarQube, Selenium, PyTest & JMeter resulting in over 80% code coverage & 0% downtime during peak load.
- Implemented a CI/CD pipeline which deployed containerized frontend & backend applications onto cloud servers with <2min deploy times.

**Software Engineer Teaching Assistant** - *University of Alberta* *Sept 2023 - April 2024*

- Led & mentored 4 teams of students to meet with stakeholders, develop a full stack Android application with Java & Firebase, & present their successful solutions ahead of project deadline.
- Taught classes of 400 students Object Oriented Programming, Android app development, & engineering best practices with positive feedback from both professor & students.
- Created instructional Java applications with detailed documentation which allowed students to effectively learn Java development & debug their own programs.

**Python Automation Developer** - *Save-On-Foods Grocery Store* *Aug 2020 - Jul 2021*

- Developed Python automations to analyze historical purchase data & forecast order demand, saving over \$3000 monthly for the business in operating costs.
- Grew relations with stakeholders & suppliers through personalized customer solutions.
- Managed & mentored 10+ employees in daily retail work resulting in increased customer satisfaction.

## Projects

**Music Streaming Discord Bot** - *NodeJS, NoSQL, Google API, Weather API*

- Interactive chatbot providing music streaming services & 10+ other integrations to over 400 Discord servers with <50 ms latency.

**IoT Smart Home Application** - *Java, SQL, Hibernate, Python*

- Used TDD to add 5+ new features, addressed 90% of technical debt, integrated automated testing framework, & created a visual interface to view usage statistics for an existing IoT application.

**Realtime Chat Application** - *Golang, Echo, HTMX, AlpineJS* - [Project Link](#)

- Chat app where users can create group discussions, leveraging Golangs powerful concurrency.

**Machine Learning Tools** - *TensorFlow, R, Julia, Unity*

- Various machine learning apps - time series forecasting, computer vision, A\*, gradient descent, etc.

## Technical Skills

**Languages:** Java, Python, C/C++, JavaScript, HTML/CSS, SQL, Go, ASM, R, Matlab

**Technologies:** Git/Github, Docker, React, Django, NodeJS, Unix, &roid, Gradle, MongoDB, Excel