Charlie Kim

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Education

University of Alberta - *BSc. in Computer Science Specialization - GPA: 3.75/4*   *Sep 2019 - April 2024*

Professional Experience

Backend Engineer Intern - *Vosyn*   *Dec 2024 - Present*
- Design and optimize **PostgreSQL** & **NoSQL** queries to organize and retrieve user data & **train multimodal language models**.
- Develop robust APIs in **Django** & **FastAPI** to interface with LLMs & server-side components.
- Build & deploy a scalable & secure backend platform on **Google Cloud Platform**.

Full Stack Developer - *ABC Head Start Society*   *Jan 2024 - Sep 2024*
- Built a web platform and custom hardware drivers in **React Typescript** & **MySQL** and secured it with NGINX & SSL, enabling **10,000+ users** to browse & share audiobooks.
- Implemented CI/CD pipeline with Github Actions which deployed containerized applications to Linux machines hosted on **Microsoft Azure** with **<2 min** deploy times.
- Developed a **RESTful API** in **Django** with Swagger documentation, enabling admin and users to easily upload and download ebooks from file storage on Microsoft Sharepoint.
- Created a comprehensive stress & fault testing framework using **SonarQube, Selenium, PyTest** & **JMeter** resulting in **80%+ code coverage** & **0% downtime** during peak load.

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 labs for a class of **400 students** Object Oriented Programming, Android app development, & engineering best practices resulting in **90%+ positive** course feedback.
- Created instructional Java applications with detailed documentation which allowed students to effectively learn Java development & debug their own programs.

Dairy Manager - *Save-On-Foods Grocery Store*   *Aug 2020 - Jul 2021*
- Developed scripts in **Python** & **Excel** to query an **Oracle SQL** database, analyzing purchase data & forecasting demand to optimize order picking by **40%**.
- Managed & mentored **10+ employees** in daily retail work resulting in increased customer satisfaction.

Projects

Music Streaming Discord Bot - *NodeJS, NoSQL, Google API, Weather API*
- Chatbot with music streaming & 10+ other integrations on over **400 Discord servers**.

IoT Smart Home Platform - *Java, Hibernate, Dropwizard, 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.

Real time Chat Application - *Golang, Echo, HTMX, AlpineJS* - Project Link
- Chat app where users can create group discussions, leveraging Golangs powerful concurrency.

Machine Learning Applications - *TensorFlow, R, Julia, Unity*
- Various machine learning apps - time series forecasting, computer vision, A*, gradient descent, etc.