

# Charlie Kim

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## Education

University of Alberta

Bachelor of Science in Computer Science Specialization

Sep 2019 - April 2024

GPA: 3.75 / 4.00

## Professional Experience

Backend Engineer Intern - Vosyn

Dec 2024 - Present

- Design and optimize **PostgreSQL** and **NoSQL** queries to organize & retrieve user data & run inference on **multimodal language models**.
- Develop robust APIs in **Django** & **FastAPI** to interface with LLMs & server-side components.
- Build & deploy a scalable & secure backend on **Google Cloud Platform** for uploading media & running AI-powered natural language translation.

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 greater 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.