

Alexander Yoon

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Experience

Software Development Engineer Intern – Android

May 2025 – Aug. 2025

Amazon

Vancouver, BC

- Built “Overnight Upload” for Amazon Photos Android (200M+ users), increasing full backup completion by **15%**.
- Developed end-to-end feature in Kotlin across Android UI and AWS-backed services, improving large-scale upload reliability.
- Designed metrics dashboards and alarms, reducing mean time to detect (MTTD) failures by **30%**.
- Owned feature development from design to deployment within a large-scale Android system.

Software Engineer Intern – Salesforce ECRM

Sep. 2024 – Apr. 2025

CIBC

Toronto, ON

- Built data pipelines using Azure Data Factory and Databricks to process **millions of records** for scalable ML workflows.
- Developed Python services and REST APIs to automate reporting and deliver data-driven insights.
- Engineered feature pipelines using NumPy and Pandas for preprocessing and analysis on large datasets.
- Integrated ML solutions into Salesforce ECRM, enabling production use of model-driven features.

Projects

Pocket AI | *React Native, TypeScript, Flask, Python, Whisper, ffmpeg, REST APIs*

- Built a voice-driven mobile app for dairy farmers to log tasks hands-free, integrating with external APIs to sync records in real time.
- Developed an end-to-end voice-to-task pipeline using Whisper and a rule-based parser to extract structured fields (IDs, dates, priority) with confirmation-before-save.
- Designed full-stack system with React Native frontend and Flask backend, supporting authentication, task CRUD operations, and API integration with a partner platform.

CraveAI | *Python, LangChain, OpenAI API, ChromaDB, FastAPI, React, Google Places API, Mapbox, Docker*

- Built a RAG-based chatbot using LangChain, GPT-4, and vector search to deliver real-time restaurant recommendations from natural language queries.
- Designed full-stack system with FastAPI backend and React frontend, achieving sub-second response latency.

MAL TV Score Predictor | *Python, FastAPI, scikit-learn, XGBoost/LightGBM, Pandas; React, Vite, Tailwind*

- Developed an end-to-end ML pipeline to ingest, clean, and model MAL data, serving predictions via a FastAPI service.
- Built React + Tailwind UI with dynamic anime cards, score visualization, and CSV export.
- Engineered features using TF-IDF and implemented leakage-safe training pipelines.

VANKLCommApp: Secure Chat Android Application | *Java, Android Studio, Firebase, AES Encryption*

- Built a secure Android chat application with AES encryption and KDC-based authentication.
- Implemented secure key exchange protocol to establish encrypted communication channels.
- Developed features including contacts management and broadcast messaging using Firebase.

Technical Skills

Programming Languages: Python, Java, Kotlin, SQL, C, C++, JavaScript

Technologies: Android, React, React Native, Next.js, Node.js, MongoDB, HTML/CSS, Tailwind

Machine Learning & Data Science: PyTorch, TensorFlow, Pandas, NumPy, SciPy, Matplotlib, Dash, Databricks

Developer Tools: Git, GitHub, Docker, AWS, Azure, CI/CD

Education

Bachelor of Software Engineering

McMaster University

Sep. 2021 – Present

Hamilton, ON