

Alexander Yoon

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TECHNICAL SKILLS

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

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

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

Developer Tools: Git, Github, Docker, AWS, Azure, CI/CD, Agile, Scrum, JIRA, Confluence

EXPERIENCE

Amazon

May 2025 – Aug. 2025

Software Development Engineer Intern - Android

Vancouver, BC

- Developed the Overnight Upload feature for the Amazon Photos Android app, enabling background uploads during low-usage hours; helped increase users reaching the 100% complete backup state by an estimated 15%.
- Engineered both frontend UI and backend service logic in Kotlin with AWS integration, optimizing large-scale photo upload reliability.
- Designed and monitored metrics dashboards/alarms to track feature success and health; improved mean time to detect (MTTD) failures by 30%.
- Collaborated within an Agile Scrum team through sprint planning, daily standups, and code reviews, contributing production-ready code to a massive, complex Android codebase.

CIBC

Sep. 2024 – Apr. 2025

Software Engineer Intern – Salesforce ECRM

Toronto, ON

- Designed and optimized data pipelines in Azure Data Factory and Databricks to prepare large-scale datasets for machine learning workflows, improving automation, scalability, and reliability of enterprise data processes.
- Developed and enhanced Python applications and RESTful APIs to support model-driven features, automate reporting, and deliver data-driven insights to stakeholders.
- Leveraged NumPy, Pandas, and Databricks for feature engineering, preprocessing, and exploratory analysis, enabling more effective use of structured and unstructured data in ML initiatives.
- Collaborated with cross-functional teams to align ML solutions with business needs, contributing to experimentation, validation, and integration into Salesforce ECRM.

EDUCATION

Bachelor of Software Engineering

Sep. 2021 – Present

McMaster University

Hamilton, ON

PROJECTS

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

- Developed a conversational Retrieval-Augmented Generation (RAG) chatbot integrating LangChain, OpenAI GPT-4, and Google Places API to provide mood- and craving-based restaurant recommendations using real-time user location.
- Implemented natural-language intent parsing, vector-based cuisine retrieval, and interactive React + FastAPI interface, achieving sub-second query response and high user engagement.

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

- Built an end-to-end Python pipeline to ingest and clean MAL datasets, engineer features, train a regression model, and serve predictions through a FastAPI API on Uvicorn.
- Designed a Vite + React + Tailwind interface that displays an anime card grid with cover art, MAL IDs, and color-coded score badges, plus CSV export.
- Engineered features from MAL metadata and synopsis text using TF-IDF with dimensionality control, and implemented robust preprocessing with leakage-safe splits.

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

- Developed a secure chat app for company-wide communication, ensuring confidentiality and integrity of messages.
- Implemented a Key Distribution Centre (KDC) server, mediated authentication protocol, and AES encryption to establish secure channels.
- Built features including Contacts for management and Broadcast for company-wide messaging.
- Utilized MVC1 architecture for modular development and Firebase for database management.