

Venus Lee

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Skills

Languages	Python, Java, C++, JavaScript, SQL, HTML, CSS, R
Technologies/Misc	Git, Spring Boot, React Native, React, PostgreSQL, MongoDB, RESTful APIs, OpenGL, TensorFlow/Keras,
AWS	EC2, Lambda, S3, DynamoDB, CloudWatch, IAM

Work Experience

Zomi | Software Engineer | (React Native, Python, PostgreSQL, AWS)

Nov. 2024 – Present

- Built and shipped core features including Onboarding, Product Detail Page, Search, and Posting in React Native, optimizing layouts and user experience.
- Designed and implemented Social Friendship service with PostgreSQL schema + REST APIs (Flask), and deployed backend to AWS EC2 and S3.
- Developed posting and media upload workflows, integrating frontend UI with backend services for seamless user publishing.
- Partnered with product design to balance feature tradeoffs and deliver high-impact features under tight timelines.
- Contributed to successful beta launch of Zomi's social features, driving early adoption among test users.

Acer | Machine Learning Engineer Intern | (Python)

Apr. 2023 – Aug. 2023

- Developed a CNN (EfficientNetB0) deep learning model for Glaucoma classification using retinal images from various stages and demographics, initially achieving a sensitivity and specificity of 86%.
- Increased model performance to 89% sensitivity and specificity (+3%) by fine-tuning learning rates and applying the Bengraham method.
- Implemented model checkpointing, improving training efficiency by 15%, and enhanced input quality through preprocessing techniques.
- Deployed the optimized model in a testing environment within Acer, now in trial production with B2B clients.

Education

University of British Columbia | Bachelor of Science

Graduation: 2024

Major: Mathematics Minor: Computer Science

Relevant Coursework: Data Structures and Algorithms, Machine Learning, Database Management, Software Construction, Applied Linear Algebra, Human Computer Interaction

Certifications

AWS Certified Cloud Practitioner

Issued: 2025

Amazon Web Services (AWS)

Technical Project

AmaSave – Price Tracker Website | (Java Spring Boot, React, HTML, PostgreSQL)

- Developed a price tracking website with user registration, product tracking, and price alert features.
- Implemented secure user authentication with hashed passwords and session management, and designed a real-time SMS alert system using Twilio for price change notifications.
- Built a dynamic user dashboard for real-time product tracking, price alerts, and historical trends, leveraging web scraping and API integration for periodic updates.
- Designed a normalized relational database schema in PostgreSQL to manage users, products, price history, and alerts, ensuring data integrity and scalability.

Stranded – 2D Survival Game (6-person team) | (C++)

- Led a team of 6 to develop a 2D space survival game using OpenGL for graphics rendering, incorporating complex gameplay features such as mob behaviors, item drops, story items, and a fog of war system.
- Implemented the A* pathfinding algorithm to optimize navigation and developed dynamic spawning algorithms for game mobs.
- Designed sprite sheet rendering for character animations and integrated UI screens for tutorial, starting, and ending scenes.
- Enhanced game stability through algorithm optimizations, including memory management improvements and efficient rendering techniques, preventing crashes and ensuring a consistent game resolution.