

CHAN (SAMUEL) YOO

Software Engineer | Certified AWS Associate | AI Enthusiast

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EDUCATION

Mar 2021 - Nov 2024

UNIVERSITY OF AUCKLAND

- Bachelor of Engineering (Hons) in Software Engineering
- GPA : 8.55/9.0

SKILLS

PROGRAMMING LANGUAGES

- Proficient:** Java, Python, Dart (Flutter)
- Experienced:** C/C++, Javascript, SQL,

FRAMEWORKS & TOOLS

- Frontend:** React, Flutter, Next.js
- Backend:** Flask, Django
- DevOps:** CI/CD, Docker
- AI/ML :** PyTorch, SciPy
- Cloud Platforms :** AWS (Lambda, DynamoDB, SageMaker, Java CDK)

OTHER EXPERTISE

- Object-Oriented Programming
- Algorithms & Data Structures
- Optimisation Techniques

PROFILE SUMMARY

As a recent graduate in **Software Engineering** from the **University of Auckland** with an outstanding **GPA of 8.55 out of 9**, I bring a strong ability to tackle complex challenges and an eagerness to learn. My experiences as an **AI Research Assistant**, **Machine Learning Intern**, and **Founding Member / Tech Lead** of a **\$15,000-funded AI-SaaS (mobile) startup** demonstrate my enthusiasm towards AI, programming expertise, problem-solving skills, and leadership. I bring a solid foundation in **object-oriented design**, **multi-tiered system development**, and hands-on experience in developing **complex AWS infrastructure** and **CI/CD pipelines**. I have always tried to use my technical expertise to make products that help people in society. Equipped with **3 AWS Certifications** and a strong background in Software Development principles and practices, I am eager to make an impactful contribution as a Software Engineer.

WORK EXPERIENCE

Founding Member, Tech Lead

Health Initiatives

2024 - PRESENT

Java, Flutter, React, AWS

- As the **Founding Member and Tech Lead** of a startup company, Health Initiatives, I independently developed **Align**, a mobile, along with a **multi-tiered AWS infrastructure** and **CI/CD pipeline** using **Java CDK** and **CloudFormation**.
- I implemented a **multi-language, speech-based LLM** within the mobile application to enhance the efficiency of GP consultations, addressing challenges in Aotearoa's fatigued medical industry.
- Received **\$15,000 seed funding** from the **Velocity \$100k Challenge**.

Machine learning intern

Resideo NZ

2023 - 2024

Python, Linux, Pytorch

- Trained object detection models and built robust **software solutions for complex real-life security risks**, such as Vehicle Detection, Fire-Smoke Detection and Fall Detection
- Implemented mathematical algorithms such as **Kalman Filters** to enhance pipeline robustness and accuracy.
- Actively lead the AI team** of three, proposing new approaches and ideas

CERTIFICATES

- AWS Certified Solutions Architect Associate
- AWS Certified Machine Learning Engineer Associate (Early Adopter)
- AWS Certified AI Practitioner (Early Adopter)



LANGUAGES

- English
- Korean

AWARDS

BEST FINAL YEAR PROJECT IN ROBOTICS (2024)

- Industry award sponsored by CSL (Cuthbert Stewart Limited) for the **best Final Year Research Project in the Robotics Category**.

VELOCITY \$100K CHALLENGE - 3RD PLACE (2024)

- Awarded **3rd Place** for Velocity \$100k Challenge, receiving **\$15,000 seed funding for my start-up company**, Health Initiatives

DEAN'S LIST (2021, 2022, 2023, 2024)

- Awarded University of Auckland Dean's List throughout the degree, awarded to the **top 5% of Engineering cohort**

KPMG X WDCC TECH CONSULTING COMPETITION FINALIST (2023)

- Finalist for a Tech consulting competition, consulting on technical solutions for Auckland Transport.

AI Research Assistant

University of Auckland

2023

Python, Scipy, TensorFlow, Linux

- Implemented data analysis, modelling, and AI techniques for **predicting Electrocardiographic signals** in patients, for eventual use in wearable devices
- Implemented robust Machine Learning model for Gaussian Regularisation of Body Surface signals. Also implemented an end-to-end state-of-the-art Neural Network model, making use of Vision Transformers for Electrocardiographic reconstruction.

PROJECTS

Emotional Talking Robot Research

Final Year AI Research project

2024

Python, Pytorch, Robotics

- Implemented a **multimodal emotion recognition software with chatbot integration**, as well as a **custom mapping algorithm** for the facial robot, being able to have emotional conversations with the robot.
- Conducted research on **optimisation algorithms** for Software Solutions, of mimicking human facial expressions.
- Awarded the **Best Final Year Projects in Robotics Category**

Delivery Mobile Application

SOFTENG 306 Assignment

2023

Java, Android Studio, Firebase

- Developed a mobile application using **Android Studio and Java** on food delivery named "GoGoGourmet". Proposed great focus towards **code quality and good code practice**, following **Object oriented design** and **Test Driven Development Scheme**.

Celebrity Face Synthesis Website

<https://github.com/scy02718/react-idol-face>

2023

Python, React, Flask, Pytorch

- Collected, analysed and processed data from a Korean celebrity's face and **fine-tuned a pre-trained StyleGAN2 model** for image synthesis.
- Created a **web application** using **React frontend** and **Flask backend**, implemented multiple features such as favourites and adjusting image quality.

OTHER EXPERIENCE

University Marking Assistant

2023 - 2024

- Assessed and provided detailed feedback for programming assignments in **Data Structures and Algorithms** course.

University Part II Assistant Centre Mentor

2023

- Mentored second year Software Engineering students in **Algorithms, Data Structures and Programming Methodologies**.

Private Tutoring

2022 - PRESENT

- Guided **over 12 students** in university-level programming and NCEA courses, helping them excel in their studies.

Hall Staff at Katsubi Restaurant, Rosedale & Takapuna

2021 - 2022

- Honed teamwork and communication skills while working in customer service roles.