Anselm Long

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SUMMARY

Proactive Computer Science student specialising in machine learning and artificial intelligence. Delivered anomaly detection models that identify malicious web certificates with a 96% accuracy (F1-score 0.994) at IMDA. Seeking to apply technical expertise and an empathetic mindset to build efficient solutions with positive social impact.

SKILLS

Languages: Python, Java, JavaScript, C, C++, HTML/CSS, Go, LaTeX

Frameworks/Libraries: Git, React, JavaFX, Node.js, Next.js, tRPC, YOLOv8, PostgreSQL, Render, scikit-learn, Numpy, Pandas

EXPERIENCE

Machine Learning Intern, IMDA   *May 2025 – Aug 2025*

- Designed and implemented a modular machine-learning pipeline for data parsing, feature engineering, model training and explainability, enabling rapid experimentation.
- Optimised models (Isolation Forest, One-Class SVM, Half Space Trees, Random Forest, Graph Convolution Networks and Large Language Model embeddings) to classify malicious SSL/TLS certificates, achieving a **0.994** F1-score.
- Applied explainable AI (LIME) to surface influential features in anomaly classification, improving interpretability and stakeholder trust.

Strategic Digital Projects Intern, IMDA   *May 2024 – Jul 2024*

- Curated technical content in collaboration with Microsoft and AWS to showcase emerging technology use cases in industry-facing workshops, resulting in **25%** of attendees initiating GenAI projects with real-world impact.
- Proposed and led a data consolidation initiative leveraging Salesforce to streamline cluster management and cross-team decision-making, reducing time spent locating data by **35%**

Freelance Photographer, Self-Employed   *Oct 2019 – Present*

- Managed end-to-end client relationships and vendor partnerships, increasing monthly revenue by **300% over 6 years**.
- Delivered high-quality digital photography and videography services that improved client retention and referrals.

EDUCATION

National University of Singapore (BSc in Computer Science)   *Aug 2023 – Apr 2027*

- **GPA:** 4.69 / 5.00. **Specialized Tracks:** Artificial Intelligence
- **Relevant Coursework:** Artificial Intelligence and Machine Learning, Software Engineering, Object Oriented Programming, Data Structures and Algorithms, Statistics and Probability

PROJECTS

Freak-Cha, Frontend & Computer Vision Developer, HackHarvard 2025   *Oct 2025*

- Developed *Freak-Cha*, a CAPTCHA-inspired challenge to distinguish humans from AI using facial expression recognition; awarded **Funniest Hack** at HackHarvard 2025.
- Built responsive frontend with **Next.js**, **Tailwind CSS**, and **tRPC**, integrating real-time facial recognition using **MediaPipe FaceMesh** and **YOLOv8**.
- Engineered data collection and labeling workflows to support training of the computer vision model on human facial patterns.
- Collaborated with a cross-functional team to design, pitch, and present the project, developing strong technical communication and presentation skills.

VBook, Team Lead, NUS   *Sep 2024 – Nov 2024*

- Led a team of 4 to develop a JavaFX-based CLI contact manager optimised for developers.
- Delivered a functional tool on schedule by overseeing design and implementation milestones.

MiccDrop, Team Lead, Hack & Roll, NUS   *Sep 2024 – Nov 2024*

- Developed a humorous karaoke app that rewards off-key singing using React Native, Node.js, and Supabase.
- Implemented real-time pitch detection and karaoke-style lyrics using the Spotify API.