

Melvin Ng

AI/ML Developer (P.Eng eligible)

Local Address

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SKILLS SUMMARY

- Utilized **17 years of technical experience** to set up DevOps Linux environments across various platforms including Azure, Amazon EC2, Google Cloud, and Dedicated VMs. Proficient in Objective-C, Java, and iOS and Android.
- Played a key role in maintaining the **security, integrity and confidentiality of a significant national research biobank**, underscoring the ability to **handle and secure large datasets**
- Earned an Honours degree in Applied Sciences from the University of Waterloo**, reflecting a commitment to excellence and technical expertise. Represented the university in Innovation at the [Canadian Engineering Competition](#) in 2012, showcasing leadership and innovative problem-solving abilities.
- Extensive exposure to diverse cyber threats spanning back to 2007**, coupled with a track record of adeptly navigating high-pressure situations and formulating proactive playbooks to effectively address emerging cyber risks.

EDUCATION

Bachelor of Applied Science (Honours) – *Options in Management Science and Options in Business & Entrepreneurship* Jun 2018
Electrical and Computer Engineering (P.Eng eligible), University of Waterloo | Waterloo, ON

- Focused on ML/AI courses with experience on Evolutionary ML algorithms

WORK EXPERIENCE

SOLUTIONS ARCHITECT

Dec 2022 – Dec 2024

Central Provident Fund Board | Singapore, SG

- Developed a **first-of-its-kind application** to enable document verification on **GenAI in the government cloud platform**
- Proactively finetuning GenAI by assisting it with a database of correct responses
- Presented plans for an **API security governance policy to 250+ stakeholders** to assist in the migration process from a monolithic framework to a sustainable microservices architecture

SYSTEMS DESIGN ENGINEER

May 2020 – Dec 2022

PathNova Laboratories Pte Ltd (Temasek Life Sciences, NUS) | Singapore, SG

- Rapidly developed a crucial **COVID-19 lab management system** for a startup lab within a two-week timeframe, earning recognition from the [Deputy Prime Minister](#) and facilitating the lab's swift operational launch
- Secured a platform incorporating multiple batch jobs, facilitating nearly real-time case reporting to Singapore's national contact tracing system. This initiative led to a **remarkable 89% reduction in the turnaround time** for COVID-19 test results.
- Established laboratory automation**, programming liquid handling robots and authoring standard operating procedures and quality control processes, leading to features in major publications like [The Straits Times](#)

SYSTEMS ENGINEER

Nov 2018 – May 2020

Lee Kong Chian School of Medicine (NTU & Imperial Collage) | Singapore, SG

- Full stack development experience including PHP, Xamarin (iOS/Android), Oracle APEX, SQL, PostgreSQL, and MySQL
- Administered the custom-built PHP and iOS learning management systems for medical students.
- Performed intrusive cybersecurity scans on public facing sites to ensure compliance with IBM penetration testing tools
- Secured critical systems supporting **Singapore's national genomic study with 100K participants, ensuring 99.9% system uptime** and contributing to the successful completion of the study on schedule
- Engineered a custom data platform aggregating terabytes of medical imaging, bio-impedance readings, and ultrasound data, enhancing data accessibility and resulting in **25% reduction in data processing time**, leading to more timely insights

HOBBY PROJECTS

Video Indexing Website

Jun 2007 – Oct 2011

- Conceptualized, designed, planned, and managed an internet website that achieved the top 3500 global ranking for visitors