

# SON NGO

+61 450420890 | [theson2004@outlook.com](mailto:theson2004@outlook.com) | <https://www.linkedin.com/in/son-ngo-2272b3215/> |  
<https://github.com/Ngoson2004> | <https://ngoson2004.github.io/#home>

## RELEVANT EXPERIENCE

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### CSIRO Clayton – Machine Learning Researcher Trainee

Feb 2025 – Feb 2026

- Conducted research in AI for drug discovery and assessed its real-life applicability. Apply AI to predictive analysis of molecules' pharmacokinetic properties, which accelerates drug screening and reduces its cost.
- Curated training data, implemented multitask learning, launched hyperparameter optimisation and generated various forms of molecular embeddings on Graph Neural Network. Utilised high-performance computing and SLURM for a productive workflow.
- Participated in an AI for drug discovery competition. The model achieved a top 8 position on the leaderboard, with a macro-averaged relative absolute error of around 0.57.
- Cooperated with other experts in AI engineering and computational chemistry to resolve bottlenecks and optimise AI performance. Acquired skills in academic writing through literature review and publishing papers.

### FPT Software – Remote AI Engineer Internship

July 2024 – Jan 2025

- Explored the application of multimodal models in manufacturing, leveraging their ability to simultaneously process computer vision and human language to enhance operational efficiency.
- Fine-tuned the BLIP multimodal model for meter reading in a factory setting, utilising a dataset containing labelled images and question-answer pairs to improve accuracy and automation. The project is currently in progress, with promising early results.

### Kois AI – LLM and AI Engineering Internship

June 2024 – Sept 2024

- Developed and launched a job platform called Starplan for recruiters and job seekers using Agile methodology, providing functionalities such as job description (JD) generation, resume summarisation, and candidate recommendations, streamlining recruitment processes.
- Led the development of JD generation functionality, a key differentiator for the platform, enhancing its uniqueness in the job-seeking market by automating the creation of job descriptions.
- Engineered and optimized prompts using GPT-4o-mini API for generating job descriptions for roles like Data Scientist, Security Analyst, ICT Manager, and Software Engineer, achieving a high similarity score of 0.8-0.9 compared to sample JDs, improving relevance and quality.

### Aetosky – Machine Learning Summer Internship

Nov 2023 – March 2024

- Improved the accuracy of object detection models (for buildings, roads, trees, and recreational pools) by 15% through optimising the ROI ratio to 0.5 and RPN threshold to 0.9, aiding infrastructure planning efforts.
- Labelled and processed satellite images using QGIS, applying vector polygons to create ground-truth labels, and configured the Mask-RCNN model to generate object masks with enhanced segmentation accuracy.
- Collaborated with supervisors and the project manager to report and analyse deep learning model performance, leading to informed decision-making in model testing and analysis.

## COMPLETED PROJECTS

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### Fine-tuned Distilled Bert ([link](#))

- Built and fine-tuned a Distilled-BERT model using PyTorch to specialize in COVID-19-related queries, leveraging the open-source CovidQA dataset from Huggingface.
- Improved model accuracy by 17% and confidence level by 12% over the original version through targeted fine-tuning strategies, resulting in significantly enhanced reliability for domain-specific applications.
- Published the fine-tuned model on my Huggingface repository for public access and use, demonstrating technical expertise and contribution to the open-source machine learning community.

### Logistic Regression Neural Networks ([link](#))

- Working in a team to design a Deep Learning course for Vietnamese students by writing explanation notebooks. Notebook collection consists of lectures about Logistic Regression Algorithms and Neural Networks, with code outputs and concept explanations. The Neural Networks were built without pre-built frameworks, only with Numpy.
- Data is pre-processed using filters, SMOTE, and encoders from Pandas and Scikit-learn.
- Binary classification was performed on the *Titanic Survivors* and the *Vietnamese Bank Term Deposit* datasets, resulting in an 85% accuracy in prediction on validation sets.

#### Vector search query engine ([link](#))

- A vector search index is built from the non-relational MongoDB database, with the KNN algorithm and text embeddings to find relevant context based on given keywords. The database is imported from an open-source dataset on the Hugging Face platform.
- Query engine answers user's questions precisely, by utilising the GPT-4o model API and the context extracted from the vector search pipeline.

## EDUCATION

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**Swinburne University of Technology - Bachelor of  
Computer Science - Artificial Intelligence (Professional)**

Aug 2022 - May 2026

- Highlighted skills acquired: Software Development Life Cycle, Data Science and Analytics, Cloud Computing, Deep Learning Models, Machine Learning Engineer

## LICENSES & CERTIFICATIONS

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- **Deep Learning Specialisation:** For completion of 5 courses on the mechanism of deep learning. Another course of DeepLearning.ai.
- **Machine Learning Specialisation:** For completion of 3 courses about the fundamentals of Machine Learning provided by DeepLearning.ai with Andrew Ng as the main lecturer.
- **Python for Data Visualization:** Completion of a course on LinkedIn Learning teaching about using pandas and Matplotlib for visualising data.
- **Python Essentials 2:** For completion of Python Essentials 2 course provided by Cisco.
- **Golden Key International Honour Society Member – \_Top 15%:** Recognised as the top 15% of high-performing students in all academic disciplines, validated by Swinburne University of Technology.
- **Certification of Excellence for Best Impact of Research Global LAB Vietnam - The Asia Foundation**

## SKILLS

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- **Programming Languages:** Python | Linux | C++ | SQL | LaTeX
- **Domain-specific skills:** Machine Learning Algorithms | Deep Learning Models | Data Preprocessing | Embedding Methods | NLP | Computer Vision | AI Evaluation
- **Frameworks and Libraries:** Pytorch | TensorFlow | Jupyter Notebook | Numpy | Pandas | Matplotlib | SLURM | HPC | Conda | Git | AWS | Docker
- **Transferable skills:** Research and Development | Self-learning | Academic Writing | Literature Review | Problem Solving | Team Collaboration | Attention to detail | Interpersonal Communication
- **Hobbies:** Gym | Basketball | Soccer | Reading books | Boxing

## REFERENCE: AVAILABLE UPON REQUEST

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