

Tien An Vu

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Bachelor of Computing Science (Honours)
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RESEARCH INTERESTS

NLP and conversational AI, with a focus on building dialogue agents that maintain stable personal traits, express controllable emotion, and learn user preferences over time through memory and feedback.

EDUCATION

• **University of Technology Sydney (UTS)** 2022 – Present
Bachelor of Computing Science (Honours) WAM: 88.56 | GPA: 6.75/7

PROJECTS

- **CatFace: Two-Stage Cat Face Recognition (Detection + Identification)** Nov 2025
YOLOv8-Nano face detection + Siamese EfficientNet-B0 metric learning for few-shot/open-set ID
 - Built a modular pipeline: detect/crop cat faces, then verify identity via embedding similarity (Euclidean distance).
 - Stage 1: Fine-tuned YOLOv8-Nano for cat face detection/cropping for low-power deployment.
 - Stage 2: Siamese network with EfficientNet-B0 backbone trained with triplet margin loss for verification-style recognition.
 - Results: 95% test accuracy, Precision 0.967, Recall 0.933, F1 0.95, ROC-AUC 0.9807; threshold tuned for robust decisions.

- **Toxic Comments Classification (Multilingual, DistilBERT) with demo** May 2025
Fine-tuned distilbert-base-multilingual-cased for toxic vs non-toxic classification
 - Preprocessed and tokenised comments with DistilBERT tokenizer; padded/truncated to fixed length for batching.
 - Training: two-phase fine-tuning (English training then multilingual adaptation); used weighted loss to address class imbalance.
 - Results: English set Accuracy 0.857, ROC-AUC 0.942; Multilingual set Accuracy 0.818, ROC-AUC 0.875.
 - Implemented training/evaluation pipeline and deployed a web demo for showcasing.
 - Live demo: shaggy-lot-042991.framer.app

TECHNICAL SKILLS

Languages: Python, C++, Java, C#, SQL, HTML
ML/Data: NumPy, pandas, scikit-learn, PyTorch, TensorFlow, Jupyter
Algorithms & Data Structures: Strong problem-solving background (competitive programming); comfortable with common DS/Algo patterns (graphs, DP, greedy, binary search, heaps, hashing).
Tools: Git, Linux, (AWS), VS Code, Latex
Interests: NLP, conversational AI, evaluation, optimisation, reproducible experiments

PROGRAMS & TRAINING

- **Amazon Machine Learning Summer School** 2024
- **Machine Learning Specialization (DeepLearning.AI / Coursera, Andrew Ng)**
- **Deep Learning Specialization (DeepLearning.AI / Coursera, Andrew Ng)**

ACHIEVEMENTS

- **Academic Performance:** (UTS) WAM: 88.56, GPA: 6.75/7
- **Competitive Programming:** Third Prize, Hanoi City-level Excellent Student Competition (Informatics), Vietnam (2021)