Manh Nguyen

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SUMMARY

I am pursuing my PhD journey at Applied Artificial Intelligence Initiative, Deakin University. My thesis, "*Towards Reliable Large Language Models for Open-ended Question Answering*", aims to explore how we can build more trustworthy AI systems that can handle open-ended questions effectively. Before that, I spent 5 years applying machine learning to solve data science problems in the industrial fields.

EDUCATION

Hanoi University of Science and Technology   **Hanoi, Vietnam**
Bachelor of Science (B.S.) in Electronics and Communications Engineering   *Aug. 2012 - Jun. 2017*
- Honors Program
- GPA: **3.28/4** (convertible to 10-scale: **8.2**)
- Class rank: **3rd/22**

PAPERS

Publications

Manh Nguyen, Sunil Gupta, and Hung Le. "*Probabilities Are All You Need: A Probability-Only Approach to Uncertainty Estimation in Large Language Models*". Accepted to AAAI 2026.   *2025*

Nguyen, Tuan Duy, Duc Minh Nguyen, **Huu Manh Nguyen**, and Thi Quynh Giang Nguyen. "Topic classification of Vietnamese product reviews in e-commerce using PhoBERT". Published at Journal of Marketing Analytics.   *2025*

Tran, Luan, **Manh Nguyen**, and Cyrus Shahabi. "Representation learning for early sepsis prediction.". Published at Computing in Cardiology (CinC).   *2019*

Preprints

Manh Nguyen, Sunil Gupta, and Hung Le. "*Distance Is All You Need: Radial Dispersion for Uncertainty Estimation in Large Language Models*". Under Review.   *2025*

Manh Nguyen, Sunil Gupta, Dai Do, and Hung Le. "*GRAD: Graph-Retrieved Adaptive Decoding for Hallucination Mitigation*". Under Review.   *2025*

Manh Nguyen, Dung Nguyen, Dai Do, Svetha Venkatesh, and Hung Le. "*Uncertainty-Guided Checkpoint Selection for Reinforcement Finetuning of Large Language Models*". Under Review.   *2025*

Manh Nguyen, Sunil Gupta, and Hung Le. "*CAAD: Context-Aware Adaptive Decoding for Truthful Text Generation*". Under Review.   *2025*

Tam Trinh, **Manh Nguyen,** and Truong-Son Hy. "*Towards Robust Fact-Checking: A Multi-Agent System with Advanced Evidence Retrieval*". Under Review.   *2025*

Dai Do, **Manh Nguyen**, Svetha Venkatesh, and Hung Le. "*SPaRFT: Self-Paced Reinforcement Fine-Tuning for Large Language Models*". Under Review.   *2025*

PROFESSIONAL EXPERIENCE

Applied Artificial Intelligence Institute (A2I2, Deakin University)   **Geelong (Victoria), Australia**
PhD Student   *Oct. 2024 - Current*

*My research focuses on improving reliability of LLMs, including hallucination detection and mitigation. I am currently working under the supervision of **Dr. Hung Le** (primary supervisor) and **Prof. Sunil Gupta** (co-supervisor).*

- Research Assistant (6 hours/week)   *May 2025 - Present*
- Delivered hands-on tutorial session on detecting LLM hallucinations at AJCAI 2024   *Nov. 2024*

XPON Technologies Group (ASX:XPN, Repensentative Office)   **Hanoi, Vietnam**
Data Scientist   *May 2022 - Oct. 2024*

My work focused on developing the Data Science portion of Wondaris (a Customer Data Platform product).

- *Identity Resolution:* Research, design, and implement deterministic identity matching for both incremental and batch pipelines.
- *End-to-End Machine Learning:* Build and deploy ML solutions on Google Cloud, covering data processing, feature engineering, training, evaluation, prediction, and monitoring for use cases such as churn, propensity, LTV, and customer segmentation using unified CDP data.
- *Automated Feature Suggestions:* Develop an engine that automatically recommends optimal features from client configurations, supporting multiple model types while handling data quality, processing, and overfitting mitigation.
- *LLM-based Config Automation:* Convert user prompts into structured JSON configs with explanations, suggestions, and composed components (filters, segments, audiences).

Vin3S (a subsidiary of Vingroup)   **Hanoi, Vietnam**
Data Scientist   *Apr. 2021 - May 2022*
  My work focused on building data warehouses and solving data science problems for VinHomes (a real estate company).

Viettel Digital Services (a subsidiary of Viettel Group)   **Hanoi, Vietnam**
Data Scientist   *Mar. 2020 - Mar. 2021*
  My work focused on building Machine Learning models to improve the operation of products on ViettelPay (an e-wallet product).

3S Intersoft   **Hanoi, Vietnam**
Machine Learning Engineer   *Apr. 2019 - Mar. 2020*

Viettel Aerospace Institute (a subsidiary of Viettel Group)   **Hanoi, Vietnam**
R&D Engineer   *Jul. 2017 - Mar. 2019*

SKILLS

- *Programming:* Python/Pyspark, SQL.
- *Machine Learning libraries:* Scikit‑learn, Numpy, Pandas, Tensorflow/Keras, PyTorch.
- *Tools:* Google Cloud Platform.

HONORS AND AWARDS

1st Prize, Kalapa Credit Scoring Challenge for Students.   *Oct. 2020*
2nd Prize, Vietnam Mathematics Olympiad for University Students   *2015*
1st Prize, Vietnam Mathematics Olympiad for University Students   *2013*

CERTIFICATIONS

Google Cloud - Professional Machine Learning Certification & Professional Data Engineer Certification   *2022*