MINH-DUNG DAO (ROBERT DAO)

Cork, Ireland
robert.dao@reliable-ai.org
ORCID: 0009-0001-8353-0343 · Google Scholar: 870 citations, h-index 4

RESEARCH PROFILE

PhD researcher in Computer Science building reliable AI for medical education. With UCC's ASSERT clinical simulation centre and clinicians, I am developing an AI assessment system for simulation-based clinical training that scores performance from multi-camera video, thermal imaging, audio and speech, grounds every score in time-stamped evidence, and defers to the educator when that evidence is insufficient.

EDUCATION

University College Cork (UCC), Ireland Oct 2023 – present (exp. 2027)
PhD in Computer Science, School of Computer Science and Information Technology
Thesis: Medical training analytics framework with enhanced feedback using Reliable AI methods
Supervisor: Assoc. Prof. Hoang D. (Harry) Nguyen, Reliable AI Lab (RAIL)
Funded by the Research Ireland Centre for Research Training in Artificial Intelligence (CRT-AI)

WorldQuant University, USA (online) Jan 2023 – Jul 2025
Master of Science in Financial Engineering, GPA: 90/100
Capstone project: Enhancing pair trading strategies for currency pairs using Deep Learning models

Hanoi University of Science and Technology (HUST), Vietnam Aug 2018 – Oct 2022
Major: Computer Science, GPA: 3.75/4
Certificate of Merit for Excellent Academic Achievement (best 15 students of the Class of 2022)

RESEARCH PUBLICATIONS

AI for medicine and health

[1] K. Salim, **M.-D. Dao**, H. D. Nguyen. "AI-Empowered Handover Tool Design in Medical Practice Towards Patient Safety." *Social Computing and Social Media (SCSM 2026), HCI International 2026*, LNCS 16715, Springer, pp. 324–337.

[2] **D. Dao**, J. Y. C. Teo, W. Wang, H. D. Nguyen. "LLM-Powered Multimodal AI Conversations for Diabetes Prevention." *Proc. 1st ACM Workshop on AI-Powered Q&A Systems for Multimedia*, 2024. *[cited by 43]*

Other AI research

[3] **D. Dao**, Q. M. Le, H. T. Lam, D. T. Le, Q. V. Pham, B. O'Sullivan, H. D. Nguyen. "Agentic Design Patterns: A System-Theoretic Framework." *NeurIPS 2025 Workshop on Bridging Language, Agent, and World Models for Reasoning and Planning (LAW 2025)*; arXiv:2601.19752. *[cited by 7]*

[4] K. T. Tran, **D. Dao**, M. D. Nguyen, Q. V. Pham, B. O'Sullivan, H. D. Nguyen. "Multi-Agent Collaboration Mechanisms: A Survey of LLMs." arXiv:2501.06322, 2025. *[cited by 794]*

[5] Q. Nguyen, H. Pham, **D. Dao**. "VinaLLaMA: LLaMA-based Vietnamese Foundation Model." arXiv:2312.11011, 2023. *[cited by 26]*

RESEARCH EXPERIENCE

Reliable AI Lab (RAIL), University College Cork Oct 2023 – present
PhD Researcher, National Learning Analytics Unit (NLAU), led by Prof. George Shorten, with the ASSERT Centre, UCC

- Helped design a portable multimodal data-collection workflow that adds thermal (FLIR) and 3D cameras to clinical simulation capture, applicable beyond the ASSERT Centre to other medical facilities such as CAI (Dublin) and to hospitals
- Built the data inventory, transcription and score-digitisation pipeline for ISBAR handover sessions scored by clinical experts
- Ongoing: temporal evidence grounding for AI assessment, tying each score to time-stamped evidence and verifying it causally by removing or isolating the cited moment and re-scoring
- Ongoing: benchmarking multimodal architectures to find the optimal structure of interaction between video, thermal, audio and speech for reliable assessment
- Contributed to the design of an AI-supported clinical handover tool with a medical doctor (HCII 2026)

ACADEMIC SERVICE

Session Chair, S240 "Agentic AI and Data Analytics", HCI International 2026, Montreal, Canada Jul 2026
Reviewer: NeurIPS (2024, 2025), ECAI (2024, 2025), ICDM (2024, 2025), AICS 2025, MMM 2027 2024 – present

WORK EXPERIENCE

FPT Software AI Center, Vietnam Nov 2021 – Sep 2023
AI Resident
- IVYChat: fine-tuned, deployed and evaluated Large Language Models for domain-specific chatbots
- Toyota Boshoku: researched and applied advanced time-series models for motion-sickness analysis
- Research collaboration with Dr Hoang D. Nguyen (UCC) on AI for smart energy grids and code evaluation (2023)

Vingroup Big Data Institute, Vietnam May 2021 – Sep 2021
AI Engineer Intern
- Implemented speech classification models for the ViVi voice assistant in VinFast electric vehicles

ACTIVITIES

Vietnamese Students' Association in Ireland (SVIE) Jul 2024 – present
Vice President
- Organised Career Compass 2025 and 2026, connecting students with professionals from different fields
- Organised Tết Việt, the Lunar New Year celebration for Vietnamese students in Ireland
- Took part in the logistical organisation of President Tô Lâm's official visit to Ireland

Network of Vietnamese Experts in Ireland Sep 2026 – present
Member
- Network launched by the Embassy of Vietnam in Ireland to connect Vietnamese expertise in Ireland and promote Vietnam–Ireland cooperation in science, technology and education

SOICT Innovation Club, HUST Sep 2020 – Dec 2022
Vice President (Technical)
- Head of organisation for Innovation Hackathon 2021, a technology hackathon for universities in Hanoi
- Coached startup teams for regional and national hackathon competitions

HONOURS & AWARDS

Research Ireland CRT-AI PhD Scholarship 2023 – 2027
Third Prize, Irish Collegiate Programming Contest (IrlCPC) 2025
4th place, Irish Collegiate Programming Contest (IrlCPC) 2024
Second Prize, FPT Software AI Center Hackathon 2023

TRAINING & LANGUAGES

Oxford Machine Learning Summer School (OxML), participant 2026
Languages: Vietnamese (native), English (fluent)