Nguyen Quoc Khanh

📞 039-269-7777   🌐 nqkhanh2002.github.io   ✉ nqkdeveloper@gmail.com   in linkedin.com/nqkdeveloperai

Education

University of Information Technology - VNUHCM   June 2020 - Nov 2024
Bachelor of Science in Information System (GPA: 3.19 / 4.00)   *Ho Chi Minh, Viet Nam*

- **Relevant Awards:** Merit scholarships for outstanding academic performance in two semesters and a full-tuition scholarship for exceptional academic achievement in one semester.

Tay Nguyen Ethnic Minority Boarding School   2017 - 2020
Major Subject in Physical (GPA: 3.5 / 4.00)   *Dak Lak, Viet Nam*

- **Relevant Awards:** Gold Medal in Physics Olympic 10-3 (2017), Silver Medal in Physics Olympic 10-3 (2018)

Experience

Vingroup Big Data Institute - VinBigdata   Dec 2024 – Now
Speech Researcher & Engineer   *Data Engineering, MLOps, ASR, TTS*

- **Data Engineer** Developed and implemented data crawling workflows within the SpeechWorld Data Framework.
- **Machine Learning Engineer/MLOps** Enhanced SpeechBase system with new features including model tuning, backend improvements, and online/active learning capabilities.
- **Research Engineer** Conducted R&D on multilingual speech-to-text models with a focus beyond callbot systems (sample rate $> 8000Hz$).

Vingroup AI Engineer Training Program - VinBigData   July 2024 – Dec 2024
AI Engineer   *Mathematics, ML/DL/CV/NLP, AI Ethics, MLOps, Data Engineering*

- **Participated in the Vingroup AI Engineer Training Program as an AI Engineer**, a comprehensive 10-month course focused on building high-quality AI engineers with practical problem-solving skills to meet the technological resource needs of the Vingroup ecosystem.
- **Completed extensive training in key AI and data science areas**, including foundational and advanced machine learning, computer vision, natural language processing, AI ethics, linear algebra, probability, and statistics.
- **Gained hands-on experience in real-world projects** during the second phase of the program, working in professional environments on large-scale technology projects either in Hanoi or Ho Chi Minh City.

THINKPROMPT CO., LTD   Jul 2023 – Now
Team leader - Data Scientist   *Agile, MLOps, AWS EC2, MinIO, Docker, FastAPI, TensorFlow, PostgreSQL, Scraping*

- **Worked as an AI Engineer and Data Scientist at ThinkPrompt Company**, primarily focused on spearheading the development and deployment of machine learning models in natural language processing and computer vision.
- **Collaborated with cross-functional teams,** including Data Scientists and Software Developers, to integrate AI capabilities into existing systems, ensuring seamless functionality and scalability.
- **Conducted rigorous data analysis and model validation** using state-of-the-art algorithms and frameworks to ensure the highest level of accuracy and reliability in AI-driven solutions.

MAICO Group   May 2022 – August 2022
AI Engineer Intern   *Recommendation system on real estate system*

- Interned as an AI Engineer at MAICO Group, primarily focused on recommendation system development.
- Contributed to the development and enhancement of recommendation systems within the company's technological ecosystem.

Vietnam Olympiad in Informatics (VNOI)   Jul 2020 – Dec 2022
Algorithmic Problem Setter   *Algorithms, Tester, Problem Setter*

- Designed and tested algorithmic problems for competitive programming competitions. Conducted beta testing, considered time complexity, and provided sample input/output.
- Collaborated with other designers, generated test data, and continuously improved the competition process.

Project

Ventus - Horse Racing Betting | *Agile, MLOps, AWS EC2, MinIO, Docker, FastAPI, TensorFlow, PostgreSQL, Scraping*
- Spearheaded the development of a data-driven horse racing betting system using Agile and MLOps frameworks, integrating real-time data acquisition via web scraping and APIs, and deploying predictive models with TensorFlow on AWS EC2.
- Orchestrated a multi-faceted deployment architecture incorporating FastAPI, Docker, PostgreSQL, and MinIO to deliver scalable betting services, automated result dissemination through web and email interfaces, and robust data management.
- Continuously refined predictive algorithms and managed a dynamic betting interface, enhancing model accuracy and user engagement, which significantly boosted profitability and provided comprehensive performance reporting to stakeholders.

Advanced Driver Assistance Systems | *Deep Learning, Image Processing, Yolo, ADAS, TenssoRT*
- Developed an Advanced Driver Assistance System (ADAS) using Python and OpenCV, implementing features such as Lane Departure Warning System (LDWS), Lane Keeping Assist System (LKAS), and Forward Collision Warning System (FCWS) to enhance vehicle safety.
- Engineered computer vision algorithms to accurately detect and track lane markers in real-time, utilizing edge detection and optical flow techniques, significantly improving driving decision support under varying environmental conditions.

Sign Language Translation | *TypeScript, HumanGAN, LLM, Skeleton Viewer, Mobile/Web*
- Developed a real-time sign language translation solution with multi-language support, leveraging cutting-edge machine learning for accurate sign-to-text and text-to-sign conversions.
- Enhanced user interaction through an intuitive interface for both desktop and mobile, enabling speech-to-text, text normalization, and internationalization across 107 languages.
- Innovated with 3D avatar animations and Human GAN technology for realistic sign language visualization, complete with video output features for sharing and accessibility.

Manuscript

The Ethics of Advanced Driver-Assistance System Based Computer Vision   11/2024
Nguyen Quoc Khanh, Nguyen Hoang Trung, Nguyen Trong Hoang, Duong Thi An, Dam Van Hien, Vo Ngoc Bich Uyen

Optimizing Horse Racing Predictions through Ensemble Learning and Automated Betting Systems   10/2024
Nguyen Quoc Khanh, Nguyen Phuoc Sang, Tran Thi My Quyen, Tran Vu Anh

Computer Vision for Safety Management: A Case Study in the Construction Industry   10/2024
Nguyen Quoc Khanh

Certificate

TensorFlow Developer Professional Certificate   2023
DeepLearning.AI   *TensorFlow 2.x, Machine Learning, Deep Learning*

Data Science Professional Certificate   2023
IBM   *Data Analysis Software, Computer Programming, SQL, Probability & Statistics*

AI Engineering Professional Certificate   2023
IBM   *Apache Spark, SciPy, Keras, Pytorch, TensorFlow, Big Data*

Project Management: Professional Certificate   2023
Google   *Entrepreneurship, Scrum, Risk & Budget Management, Influencing*

IT Automation with Python Professional Certificate   2023
Google   *Automation, Version Control, Manage IT Resources, Problem Solving*

Award

Physics: Gold Medal in Physics Olympiad 10-3 (2017), Silver Medal in Physics Olympiad 10-3 (2018).
Languages: TOEIC: RL 750/990, SW 270/400.
Scholarship: Merit scholarships ($200) for outstanding academic performance in two semesters and a full-tuition scholarship ($700) for exceptional academic achievement in one semester.