



# Khanh Quoc Tran

DATA SCIENTIST · RESEARCH ENGINEER · TEACHING ASSISTANT

Samsora Riverside Apartment, Binh Thanh ward, Di An town, Binh Duong province, Vietnam

(+84) 971-958-350 | [khanhtq@uit.edu.vn](mailto:khanhtq@uit.edu.vn) | [kh4nh12](https://www.linkedin.com/in/kh4nh12) | [kh4nh12](https://github.com/kh4nh12) | [Khanh Quoc Tran](https://orcid.org/0000-0002-9100-1111)

*"As a data scientist, I'm interested in investigating Big Data by utilizing Data Analyst and state-of-the-art Machine Learning methods to solve challenging tasks related to media products such as Data Mining, Natural Language Processing, and Social Analysis, which provide powerful visualization tools and predictive models for leaders and organizations to make the right decisions at the right time."*

## Education

### VNUHCM - University of Information Technology

BACHELOR OF DATA SCIENCE; GPA: 3.27/4.0

Ho Chi Minh City, Vietnam

Sep. 2018 - Sep. 2022

**Thesis:** Hate and Offensive Detection on Vietnamese Social Media Text Using PhoBERT-CNN Model

**Research interest:** Natural Language Processing (NLP), Information Extraction, Emotions and Sentiment Analysis, Social Media Mining

## Skills

**Programming** Python (proficient), C/ C++, Java, SQL (prior experience).

**Technologies** Spark (prior experience), Git (prior experience), PyTorch (proficient), FastAPI (prior experience).

**Languages** Vietnamese (Native), English (Limited working)

**Others** Algorithms skill, Solving Problems, Creativity, Leadership, Quick learner.

## Work Experience

### University of Information Technology

Ho Chi Minh City, Vietnam

TEACHING ASSISTANTS FOR DATA SCIENCE

Sep. 2021 - Present

- Helped to design course materials and structure for Machine Learning, Deep Learning, and Social Mining course.
- Supported students in the course with their research projects involving applied Machine Learning, Deep Learning.
- Developed homework assignments and illustrations for the course's teaching sessions.
- Collaborated with the lecturer and three other TAs to lead presentations, evaluate coursework, and answer questions from 100+ students.

### AISIA Research Lab

Ho Chi Minh City, Vietnam

RESEARCH AND DEVELOPMENT ENGINEER

Oct. 2021 - Present

- Built fully automated data pipelines on AirFlow for containerized applications using Docker, AWS and Redshift.
- Designed an overall service architecture and pipelines of the Machine Learning based Noise Detection and Post Type Classification API product.
- Deployed several API in Python and in the AWS resources.
- Implemented Superset for analytic dashboards to visualize the results and serve for further analysis and management processes.
- Analyzed data from an investment fund and related issues; surveyed and implemented solutions based on optimization and statistical models.
- Utilized python to implement several Machine learning techniques for VDI - A reliable framework for breakthrough in Investment Performance.
- Conduct various investigations of state-of-the-art ML approaches and develop appropriate models for aspect detection for telesales calls.
- Extract words, phrases, and sentences that frequently result in successful calls for customers of particular demographics.

## Publications

### Journal Papers

- Khanh Quoc Tran**, An T Nguyen, Phu Gia Hoang, Canh Duc Luu, Trong-Hop Do, and Kiet Van Nguyen. 2022. **Vietnamese Hate and Offensive Detection using PhoBERT-CNN and Social Media Streaming Data**. Neural Computing and Applications. Q1 **SCIE** IF: 5.102
- Binh T Nguyen, Tung Tran Nguyen Doan, Son Thanh Huynh, **Khanh Quoc Tran**, An Trong Nguyen, An Tran-Hoai Le, Anh Minh Tran, Nhi Ho, Trung T Nguyen, and Dang T Huynh. 2022. **An end-to-end named entity recognition platform for Vietnamese real estate advertisement posts and analytical applications**. IEEE Access, 10:87681–87697. Q1 **SCIE** IF: 3.476

### Conference Papers

- Khanh Quoc Tran**, An Tran-Hoai Le, An Trong Nguyen, Tung Tran Nguyen Doan, Son Huynh Thanh, Bao Le Hoang, Hoang Nguyen Minh, Triet Minh Thai, Hoang Le Huy, Dang T. Huynh, Binh T. Nguyen, Nhi Y. T. Ho and Trung T. Nguyen. 2022. **SEND: A Simple and Efficient Noise Detection Algorithm for Vietnamese Real Estate Posts**. In Proceedings of the 36th Pacific Asia Conference on Language, Information and Computation. Rank B **CORE2021**
- Khanh Quoc Tran**, An Trong Nguyen, An Tran-Hoai Le, and Kiet Van Nguyen. 2021. **ViVQA: Vietnamese Visual Question Answering**. In Proceedings of the 35th Pacific Asia Conference on Language, Information and Computation, pages 546–554. Rank B **CORE2021**

- **Khanh Quoc Tran**, Khanh Quoc Tran, Phap Ngoc Trinh, Khoa Nguyen-Anh Tran, An Tran-Hoai Le, Luan Van Ha, and Kiet Van Nguyen. 2021. **An Empirical Investigation of Online News Classification on an Open-Domain, Large-Scale and High-Quality Dataset in Vietnamese**. In New Trends in Intelligent Software Methodologies, Tools and Techniques, pages 367–379. IOS Press. Rank C **CORE2021**
- **Khanh Quoc Tran**, Binh Van Duong, Linh Quang Tran, An Le-Hoai Tran, An Trong Nguyen, and Kiet Van Nguyen. 2021. **Machine Learning-Based Empirical Investigation for Credit Scoring in Vietnam's Banking**. In International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, pages 564–574. Springer. Rank C **CORE2021**

## Honors & Awards

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### INTERNATIONAL

- Jun. 2021 **Champion**, Entry Categorical of Digital Water Hackathon Singapore  
 Jun. 2021 **1st Runner-up Best paper Award**, Entry Categorical of Digital Water Hackathon Philippine

### DOMESTIC

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|--|---|
| Aug. 2022 <b>Encourage Academic Scholarship</b> , Scholarships for excellent students                                    | <span style="color: red;">Ho Chi Minh City</span> |
| Dec. 2021 <b>Typical student of 5 merits</b> , VNUHCM - University of Information Technology                             | <span style="color: red;">Ho Chi Minh City</span> |
| Dec. 2021 <b>Compliment Certificate</b> , VNU HCMC President compliment the main authors of articles recognized by ISI   | <span style="color: red;">Ho Chi Minh City</span> |
| Dec. 2021 <b>2nd Place</b> , The 5th MAKERTHON   | <span style="color: red;">Ho Chi Minh City</span> |
| Dec. 2021 <b>Gold Prize</b> , The 9th DESIGN - CREATE - APPLY  | <span style="color: red;">Ho Chi Minh City</span> |
| Jun. 2021 <b>Best Presentation Award</b> , The UIT Young Scientist Summit  | <span style="color: red;">Ho Chi Minh City</span> |
| Jun. 2020 <b>Certificate of Merit</b> , Making positive contributions to the Association's work and the Student movement | <span style="color: red;">Ho Chi Minh City</span> |
| Jan. 2020 <b>Good Soldier</b> , UIT Spring Volunteering Campaign   | <span style="color: red;">Ho Chi Minh City</span> |

## Presentation

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| Feb. 2022 <b>Vietnamese Hate Speech Detection: Fundamental and Applied Sciences</b> , AISIA Research Lab Seminar #1 | <span style="color: red;">Online</span> |
| Feb. 2022 <b>How to avoid ML pitfalls: a guide for academic researchers</b> , DS@UIT Research Lab Seminar           | <span style="color: red;">Online</span> |
| Nov. 2021 <b>ViVQA: Vietnamese Visual Question Answering</b> , The 35th PACLIC                                      | <span style="color: red;">Online</span> |
| Sep. 2021 <b>An Empirical Investigation of Vietnamese Online News Classification</b> , The 20nd SOMET               | <span style="color: red;">Online</span> |
| Jul. 2021 <b>Machine Learning-Based Empirical Investigation for Vietnam's Credit Scoring</b> , The 34th IEA/AIE     | <span style="color: red;">Online</span> |

## Program Committees

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| 2022 <b>Program Committe Member</b> , ACL, ACL Rolling Review, NAACL, COLING, EMNLP, EACL | <span style="color: red;">U.S.A</span>   |
| 2018 <b>Standing Committee Member</b> , Vietnamese Students' Association, UIT             | <span style="color: red;">Vietnam</span> |

## Extracurricular Activity

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### Asian Student Workshop

CHOSEN REPRESENTATIVE OF UIT Chiba, Japan  
Mar. 2022

- Introduce activities for the SDGs in countries and Universities.
- Discuss on new ideas and products that contribute to the selected topic of the SDGs.

### UIT Spring Volunteering Campaign

MEMBER Ho Chi Minh City, Vietnam  
Jan. 2022

- Participated in several fundraising programs and distributed gifts to those in need.
- Oversaw the development of artificial intelligence-based products as a member of the Community Activities committee.
- Teaching poor children basic math and computer skills.

## Reference

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### MSc. Kiet Van Nguyen

VICE DEAN FACULTY OF INFORMATION SCIENCE AND ENGINEERING (UIT - VNU HCMC)

Email: kietnv@uit.edu.vn      Mobile: (+84) 986 604 744

### Dr. Binh Thanh Nguyen

HEAD OF COMPUTER SCIENCE DEPARTMENT, FACULTY OF MATHEMATICS AND COMPUTER SCIENCE (HCMUS)

Email: ngtbinh@hcmus.edu.vn      Mobile: (+84) 813 310 483