# Nguyen Khanh Linh, Ms.

Top Artificial Intelligence (AI) Voice of LinkedIn '24

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# Summary

With 13+ years of experience in Natural Language Processing (NLP), Machine Learning (ML), Data Science, and Object-oriented programming, I bring a strong foundation to any project. My expertise extends to MLOps, and software development cycle with over 5 years of hands-on experience. As a part-time researcher at DataScience-Works lab in Australia, I stay at the forefront of industry trends and advancements. Currently serve as Google Developers Group's Ambassador and advisor to various C-levels of organizations.

# **Key Skills**

- **Programming:** Python, MATLAB, Java, C/C++
- **NLP:** Topic modeling, document summarization, extraction, categorization, sentiment analysis, dialogue systems, generation, and neural machine translation
- Machine Learning: Statistical modeling, probability theory, decision trees, ensemble methods, SVM, using frameworks like Keras, Gensim, scikit-learn, PyTorch, and TensorFlow for classification, detection, and prediction tasks
- Deep Learning: RNN, LSTM, CNN, MemN2N, BERT, and other Transformer variations (e.g., BART, GPTs)
- MLOps & ML Platform: End-to-end pipeline development with feature stores and serving pipelines using AWS SageMaker and Databricks in Datalake ecosystems
- Optimization: Expertise in mathematical optimization (convex/concave, linear problem, large-scale) and LLM optimization techniques (Unsloth, FlashAttention, PEFT, LoRA/QLoRA)
- Databases: SQL (PostgreSQL, MySQL, MSSQL), NoSQL (MongoDB), big data frameworks (Hadoop, Spark) and Vector Database for Semantic searching like Chroma DB, Qdrant, Pinecone
- LLM-RAG/Agentic LLMs Development & Deployment: Experienced in using Langchain, LlamaIndex, Haystack, and LocalAI for full end-to-end offline and cloud LLM-RAG development & deployment
- Other GenAI Applications' Development & Deployment: Graphic Design and Layout generation & evaluation, multilingual Text-to-SQL, and context-switching dialogue systems with dynamic RAG

# Experience

#### Obello, San Francisco Bay Area - Remote

Head of AI & ML Aug 2024 – Present

In charge of researching, implementing and deploying state-of-the-art generative AI-based & Machine Learning models to enable design and marketing teams to instantly create beautiful, on-brand content at scale. Obello is an AI graphic design platform that creates on-brand marketing content 10

times faster than traditional methods. Obello accelerates the production process, enabling design and marketing teams to produce stunning, on-brand content at scale.

# HeyJuni, Singapore

#### Co-Founder & CTO

July 2024 - Present

Developing cutting-edge digital platforms and tools that empower individuals struggling with emotions, feelings, and mental health challenges. By applying advanced AI capabilities, our startup provides personalized, accessible support - ensuring no one has to face these challenges alone.

# Techcombank (TCB), Hanoi, Vietnam

#### Machine Learning Platform & AI Research Lead

Oct 2022 - July 2024

- Led and managed team of Senior Data Scientists & ML Engineers under Advanced Analytics & Innovation
- Developed internal TCB-based GPT chatbot, code generator, and neural machine translation model
- Implemented Large-scale Graph Machine Learning for transaction network and fraud detection

#### DataScience-Works lab, Australia

## Researcher (remote/part-time)

July 2023 - Present

- Focus on cutting-edge research projects with Prof. Nayyar Zaidi research group
- Research areas include Optimization in Machine Learning, Data Synthesization, NLP and Adversarial Attacks

# Zoala Pte. Ltd., Singapore

#### AI/ML Advisor (remote/part-time)

Oct 2022 - Apr 2023

- Led architecture design and roadmap planning for AI-powered mental wellness companion
- Managed AI development team across Singapore, Malaysia and Vietnam
- Conducted code reviews and provided technical guidance

### AI Products & Solutions, Mediacorp Pte. Ltd.

#### Senior Manager / Data Scientist

Apr 2022 - Sep 2022

- Managed R&D projects on dialogue systems, including chatbots and task-oriented systems
- Developed solutions for grammar correction, topic modeling, sentiment analysis
- Led legal document summarization and text classification initiatives

### Language Service team, Shopee Singapore

# Senior Data Scientist / Senior Algorithm Engineer

Dec 2020 - Mar 2022

- Developed Multilingual Neural Machine Translation for cross-border markets
- Implemented and deployed large-scale, real-time NLP models for production
- Provided language-related technical support across teams

## he[a]t AI Big Data Lab, Continental AG

AI Specialist

July 2018 – Dec 2020

- Led ContiTech Digital Assistant project as Chief NLP specialist & TPL
- Developed Voice-based "Connie" Digital Sales Assistant using Speech Recognition
- Technical Project Leader for AI in Software Engineering initiatives
- Integrated dialogue systems into support cycle, improving deployment efficiency

# Institute for Infocomm Research (I<sup>2</sup>R), A\*STAR Singapore

## Research Engineer/Risk Management Team Leader

June 2015 - July 2018

- Developed Information Retrieval and NLP modules for MINDEF
- Implemented Part-Of-Speech tagging and Tokenization systems
- Designed and developed NLP module for Baidu Search

# Crayon Data, Singapore

#### Data Scientist (Intern)

December 2014 – April 2015

- Implemented prototypes for information retrieval and extraction
- Developed semantic web and recommendation systems

## **IBM Singapore**

#### Data Scientist and Researcher (Intern)

August 2014 – November 2014

- Developed data crawling and information extraction systems
- Implemented text mining solutions using Python and Apache Solr

### Education

## AI Safety Fundamentals, BlueDot Impact

#### AI Alignment & Safety Certification

2024

Intensive study of AI misalignment, adversarial attacks, and mechanistic interpretability, and developed open-source project "Pressure-sense" investigating AI systems' understanding and response to pressure, examining both performance metrics and ethical implications

#### Georgia Institute of Technology

## Postgrad - Computer Science

2020 - 2021 — Dropped out

## National University of Singapore

Master of Knowledge Engineering/AI Systems July 2015 — Singapore Government Scholarship

Thesis: "Simpler Choices" using Data Science and Recommendation system approach

#### FPT University

### Degree of Engineering, Software Engineering

Dec 2013

Thesis: "Fall Detecting Device using wearable sensor"

# **Selected Publications**

- 1. Nayyar Zaidi, **KL Nguyen**, et al. Aspect-based Automated Evaluation of Dialogues in Call Centers, Knowledge-Based Systems Volume 279, 2023
- 2. Y Ma, **KL Nguyen**, F Xing, E Cambria. A survey on empathetic dialogue systems, Information Fusion (2020)
- 3. **Nguyen, K. L.** & Nguyen, M. H. Cyberbullying and its effects on Vietnamese youth, Regional Conference of Psychology, Vietnam (2017)
- 4. **Nguyen, K. L.**, Nguyen, D. K. T. & Nguyen, T. H. Effectiveness of Online Peer Support Group and Its Interventions: A Case Study of Beautiful Mind Vietnam, Regional Conference of Psychology, Vietnam (2017)

## **Patents**

- 1. Personalized Dialogue System Powered by Dynamic Knowledge Graph using Active Learning Main author, under Continental Automotive Pte. Ltd (2020)
- 2. Passenger Privacy Preservation With Federated Learning Based On Canonical Correlation Co-author, under Continental Automotive Pte. Ltd (2020)
- 3. Singlish Tokenizer Main author, under A\*STAR (2018)

# Selected Awards and Certificates

- AI Alignment & Safety, AI Safety Fundamentals 2024 (BlueDot Impact)
- Databricks Machine Learning in Production 2024
- Excellent Employee award, Techcombank 2023
- DeepLearning.AI TensorFlow Developer Professional Certificate 2021
- Natural Language Processing (Advanced Machine Learning Specialization) 2020
- Responsible Conduct of Research Certificate 2016 (CITI)
- Develop a Risk Management Implementation Plan 2016 (Singapore Workforce Skills Qualifications)
- Finalist in the ISS-MAS Data Visualization Hackathon 2015 (Monetary Authority of Singapore)
- Third prized of ASEAN IT Competition skills, Hanoi (2007)