Tuan **Nguyen**

Tech Lead

Hanoi, Vietnam

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Summary

I design and build complex systems, with a 12-year+ track record spanning advertising, live-streaming, enterprise chat system, and a full-featured enterprise agent platform. Parallel to this, my passion for independent research has led me to explore different ideas in Deep Learning from visual search, neural vocoder, to generative AI editing. As a product-focused engineer ready to lead, my goal is to channel this unique combination of architectural discipline and deep research into building the future of AI agents.

Skills

AI & ML	RAG (Retrieval-Augmented Generation), Generative AI Pipelines
Architecture & System Design	System Design, Distributed Systems, Live-streaming, Agentic System Design, REST API Design
Back-end	Python, NodeJS, JavaScript/TypeScript
Front-end	React
Database	Mysql/Postgres, Redis, Cassandra
Dev-Ops	Docker, Gitlab CI
Languages	English, Vietnamese

Work Experience

Vinbigdata — *Hanoi, Vietnam*
Software Engineer — *May. 2023 - Now*

- Drove the technical architecture of the company's next-generation LLM agent platform, authoring 50+ technical proposals that defined its core design and features. This platform now powers key Vinbase's products including the AI Call Bot, AI Interviewer, and ViVi assistant.
- Engineered the platform's core AI modules such as agent, and advanced RAG system.
- Optimized the developer experience (DX) to improve team's velocity.
- Systematically refactored the legacy system to improve its maintainability.

Gapo — *Hanoi, Vietnam*
Software Engineer — *May. 2022 - 2023*

- Developed and optimized the backend systems for Gapowork's chat and bot features. Gapowork is leading digital workspace for enterprises. Gapowork won **Outstanding Digital Solution Award** at Vietnam Digital Awards 2021 and are widely used by many large brands in Vietnam such as BIDV, Yody, Momo,...
- In addition to developing new APIs, I dove deep into performance bottlenecks in the chat system, identifying and implementing key optimizations that led to a 100-200% improvement in p99 latency. This directly made the app feel faster and more reliable for thousands of daily users.

Cortexapp — *Hanoi, Vietnam*
Founder — *2021 - 2022*

- I built an Airtable-like product and then a Personal Knowledge System.

Umbala Technology — *Hanoi, Vietnam*
Technical Team Leader — *Jun. 2018 - Feb. 2021*

- I led a small team, adapting our focus to meet shifting priorities for Umbala.TV, a social e-commerce platform. We built the platform's foundational components, including its core backend APIs, merchant dashboard, and content management system (CMS), ...
- Designed and developed multiple, distinct real-time communication technologies, from fully distributed, P2P streaming protocol(like torrent but for live stream - **POC demo**), or low latency streaming system like Twitch (**demo**) to multi-user group video call SDK.

Admicro, VCcorp. — *Hanoi, Vietnam*
Technical Team Leader — *Nov. 2017 - Feb. 2018*

- Built and scaled Admicro's advertising system, which handles more than 600M ad requests per day, making it one of the largest ad systems in Vietnam.
- Led a team of engineers responsible for building ad services and many data systems to handle other works behind the scene.

Admicro, VCcorp. — *Hanoi, Vietnam*
Associative Team Leader — *Apr. 2017 - Nov. 2017*

Admicro, VCcorp. *Hanoi, Vietnam*

Bɪɢᴅᴀᴛᴀ Eɴɢɪɴᴇᴇʀ *Aug. 2014 - Apr. 2017*

- Designed and implemented the first frequency capping system using Spark Streaming and Cassandra.
- Proposed and implemented new solution to detect user location from IP in Vietnam with much better accuracy than existing paid solutions in the market.
- Built near real-time recommendation system for dynamic ads product, which allows to display ads related to their recently visited product pages.

Sunnet *Hanoi, Vietnam*

HTML5 ᴅᴇᴠᴇʟᴏᴘᴇʀ ɪɴᴛᴇʀɴ *Jul. 2012 - June. 2013*

- Researched and developed web games using HTML5 technologies. I developed 5 games using different technologies such as RaphaelJS, Box2D.js, TweenJS, Three.JS,..

Honors & Awards

Excellent Employee Award *VCCorp*

2015, 2016, 2017

Excellent Employee Award *Vinbigdata*

2024

Top GitHub Developer in Vietnam by followers (ranked #207) *GitHub Community Rankings*

2025

Side Projects

Stealth AI Imaging Project

Aɪ sᴛᴀʀᴛᴜᴘ *2025*

- Finetune 10+ custom LoRA adapters for SDXL model, creating specialized models for high-fidelity, image-to-image style transfer and complex asset generation tasks.
- Build and optimize workers to serve over 40 unique generative pipelines, handling tasks from image-to-image style transfer to advanced image enhancement

SnapPal

SɴᴀᴘPᴀʟ *2025*

- A vibe-coding project to explore the power of Google's Gemini Vision model combined with the intuitive UI of Tldraw.

obsidian-template

Oʙsɪᴅɪᴀɴ ᴛᴇᴍᴘʟᴀᴛᴇ *2022*

- My personal Obsidian templates. Obsidian is my favorite note taking app. I use it to write down ideas and what I have learned.
- It's also one of the most popular templates for Obsidian.

linearapp_clone

A Lɪɴᴇᴀʀ Aᴘᴘ ᴄʟᴏɴᴇ ᴡɪᴛʜ Rᴇᴀᴄᴛ ᴀɴᴅ Tᴀɪʟᴡɪɴᴅ CSS *2021*

- A quick **Linear.app** clone built with React and Tailwind CSS in 1 week. This project became the top of the day ReactJS's reddit channel.

cnn_vocoder

A CNN-ʙᴀsᴇᴅ Vᴏᴄᴏᴅᴇʀ *2019*

- An experiment driven by my curiosity to build a much faster neural vocoder than WaveNet, inspired by m-cnn architecture. This was a self-directed research project to push my own boundaries in Deep Learning

visual_search

A ᴠɪsᴜᴀʟ sᴇᴀʀᴄʜ ᴇɴɢɪɴᴇ ʙᴀsᴇᴅ ᴏɴ Eʟᴀsᴛɪᴄsᴇᴀʀᴄʜ ᴀɴᴅ Tᴇɴsᴏʀғʟᴏᴡ *2017*

- A visual search engine like Pinterest, based on Elasticsearch and Tensorflow, which may be one of the first open source Deep Learning-based visual search engines.
- I built this in two weeks of hacking, trying to build a visual search based on what I had learned.
- This project was featured on Github's Daily Trending.

Publications

KSE

Main author   *2015*

- N. D. Tuan, N. Q. Manh, D. V. Sang, Huynh Thi Thanh Binh and N. T. Thuy, "A Study on Non-sparse Dictionary Learning for Pattern Classification," 2015 Seventh International Conference on Knowledge and Systems Engineering (KSE), Ho Chi Minh City, Vietnam, 2015, pp. 371-376, doi: 10.1109/KSE.2015.66.
- N. Q. Manh, N. D. Tuan, D. V. Sang, H. T. T. Binh and N. T. Thuy, "Uniform Detection in Social Image Streams," 2015 Seventh International Conference on Knowledge and Systems Engineering (KSE), Ho Chi Minh City, Vietnam, 2015, pp. 180-185, doi: 10.1109/KSE.2015.63.

Education

Hanoi University Of Science And Technology
Hanoi, Vietnam

Engineer Degree. in Computer Science
2010-2015

- GPA: 3.52/4 (8.8/10).