Phan Ngọc Lân

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Experience

TopCV, AI Engineering Leader — Hanoi, Vietnam · 8/2022 – present

I am currently the AI Engineering Leader at TopCV. I manage our AI Engineering team, which tackles core business problems including Recommendation, Document Intelligence and Information Extraction.

- Manage day-to-day operations of AI engineers, data scientists, and labeling specialists.
- Provide technical leadership and make architecture decisions for the team.
- Provide in-depth guidance and mentorship to team members.
- Work closely with the MLOps team to ensure optimal operation of the internal AI Platform.
- Led the design and implementation of TopCV's Automated Job Post Screening system, automating 95% of the screening for job postings previously done manually.
- Designed and oversaw the delivery of the Job Form Filler, which helps recruiters quickly fill their job posts' contents, as well as generate detailed job forms from raw text documents.
- Led the design and implementation of an internal agent-based chatbot which queries company data sources for quick answers and dashboards.
- Led the design and implementation of the Feature Extraction platform. The platform includes batch and streaming components to index advanced ML-powered features for job posts and CVs on topcv.vn, and allows efficient feature serving for internal services
- Led the design and partially implemented the Apply Scoring system, using a combination of custom internal models and LLMs.
- Built an internal data labeling tool called Microscope as an alternative to Label Studio. We were frustrated with the performance and UX design of Label Studio at the time, so decided to build a labeling tool from the ground up while keeping Label Studio's data format and frontend library.

TopCV, AI Engineer — Hanoi, Vietnam · 6/2021 – 8/2022

I worked on the Job Recommendation system at topcv.vn, a leading recruitment platform in Vietnam

- Built job recommendation pipelines using Spark, Airflow, and Kubernetes to serve 2M+ daily recommendations.
- Designed a high-performance graph inference service to increase throughput.
- Optimized document parsing, spell checking, and MLOps components across the AI platform.

VDSense JSC, AI Engineer — Hanoi, Vietnam · 4/2020 – 4/2021

I designed and was a primary contributor for a number of AI application systems

- Built an employee check-in application (Android) with embedded C++ recognition models and supporting backend services.
- Developed EKYC APIs with ID parsing, liveness detection, and model deployment workflows on Kong.
- Implemented Ray- and Kafka-based streaming analytics with TensorRT-optimized detection models.
- Administered internal cloud services on Google Cloud Platform.

VNG Corporation, Software Developer

I was part of a team that was building various AI solutions in Computer Vision, NLP and Speech Processing

- Developed deep learning models for document classification and speech recognition.
- Created data tooling, including a crowd-sourced platform for annotating speech datasets.

Hanoi, Vietnam
1/2018 – 12/2019

Education

Master of Science   **Hanoi University of Science and Technology**, Data Science and Artificial Intelligence

- My Master thesis involved the application of deep U-Nets for medical image processing, which resulted in a published paper at the ISVC 2021 conference.
- I received a VinIF scholarship for my proposed Master thesis
- I was also co-author on 4 more research papers published at different conferences and journals.

Hanoi, Vietnam
2020 – 2021

Engineering degree   **Hanoi University of Science and Technology**, Computer Science

Hanoi, Vietnam
2014 – 2019

Skills

Python: Highly proficient. I have many years of experience building AI systems and tooling in Python

PyTorch: Highly proficient. Productionized deep learning models using PyTorch

SQL: Highly proficient. Designed and optimized data pipelines with SQL

English: Fluent. IELTS Academic 8.0/9.0 (2021)

PySpark: Worked extensively with PySpark for the early versions of TopCV's Recommendation system

Apache Airflow: Worked with Airflow for the early versions of TopCV's Recommendation system

Prefect: Migrated to Prefect from Airflow for our AI Platform

FastAPI: Highly proficient. Most APIs (10+) I've built in the past 5 years have used FastAPI

Vue.js: Highly proficient. I've built many internal tools and websites with Vue

Docker: Highly proficient. I use Docker and Docker Compose for all development environments

Kubernetes: Proficient. While I do not often manage Kubernetes clusters, I've worked extensively with DevOps and MLOps engineers to set up and optimize services on Kubernetes

Gitlab CI: Proficient. I've set up large parts of the CI/CD infrastructure for the AI team at TopCV on Gitlab

Google Cloud Platform: Over 5 years of experience working with GCP at VDSense and TopCV. Especially familiar with VertexAI and BigQuery

PostgreSQL: Highly experienced. It's my go-to database unless special requirements are involved

OpenCV: Somewhat proficient

Kotlin: Somewhat proficient. I've built a few Android apps and APIs in Kotlin

LangChain: Familiar. Most LLM projects at TopCV predate LangChain 1.0, but I've used it on and off in other contexts

Rust: Familiar. Mostly used in hobby projects

C/C++: Familiar. I work with C++ when needed, especially when involving embedded AI systems

Publications

BlazeNeo: Blazing fast polyp segmentation and neoplasm detection   2022

Nguyen Sy An, Phan Ngoc Lan, Dao Viet Hang, Dao Van Long, Tran Quang Trung, Nguyen Thi Thuy, Dinh Viet Sang
10.1109/ACCESS.2022.3168693 ⧉ (IEEE Access)

Neounet: Towards accurate colon polyp segmentation and neoplasm detection   2022

Phan Ngoc Lan, Nguyen Sy An, Dao Viet Hang, Dao Van Long, Tran Quang Trung, Nguyen Thi Thuy, Dinh Viet Sang
https://doi.org/10.1007/978-3-030-90436-4_2 ⧉ (Advances in Visual Computing. ISVC 2021. Lecture Notes in Computer Science, vol 13018)

Multifactorial evolutionary optimization to maximize lifetime of wireless sensor network   2021

Nguyen Thi Tam, Vi Thanh Dat, Phan Ngoc Lan, Huynh Thi Thanh Binh, Le Trong Vinh, Ananthram Swami
https://doi.org/10.1016/j.ins.2021.06.056 ⧉ (Information Sciences)

A hybrid clustering and evolutionary approach for wireless underground sensor network lifetime maximization   2019

Nguyen Thi Tam, Huynh Thi Thanh Binh, Dinh Anh Dung, Phan Ngoc Lan, Le Trong Vinh, Bo Yuan, Xin Yao
https://doi.org/10.1016/j.ins.2019.07.060 ⧉ (Information Sciences)