Quốc-Đạt NGUYỄN

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EDUCATION

Vietnam National University HCMC - University of Information Technology

Ho Chi Minh City, Vietnam

B.Sc. IN COMPUTER SCIENCE

2015 - 2020

- GPA: 8.49/10
- Thesis: Vietnamese sentence embedding using PhoBERT Sentence Transformers.
  Grade: 9/10
  Advisors: Dr. Thi Thao Nguyen HO, Dr. Ngoc-Hoang LUONG

SKILLS

Programming	Python, Shell script, Golang, C/C++, SQL.
Tools/Framework	FastAPI, gRPC, SQLAlchemy, HTTPX, Pytorch, Triton Inference Server, TensorRT, ONNX, Kafka, Redis. Jenkins, ArgoCD, Kubernetes, AKS, Helm, Terraform, Kubeflow, DVC.
Language	English (TOEIC 840), Vietnamese (native).

WORK EXPERIENCE

VinBrain

Ho Chi Minh City, Vietnam

Software Engineer

Nov 2020 - Dec 2023

AIviCam

- Description: Leveraging AI to enhance the effectiveness of CCTV camera systems.
- Responsibilities:
  - Built a high-performance face searching service utilizing Faiss, FastAPI, and Triton Server.
  - Built pipelines for data transformation and continuous training of deep learning models using Kubeflow platform, petastorm, MinIO (S3).

SenMe (formerly known as AIviCare)

- Description: A telehealth platform that delivers care and health services through mobile devices. It has more than 10,000 activated users.
- Responsibilities:
  - Deployed services that provide ”AI” features, including digitizing medical records, speech recognition, and stroke detection based on facial expression and voice analysis through streaming. Utilized FastAPI, gRPC, Redis, TensorRT, and Triton Server for seamless integration and optimal performance.
  - Developed a push notifications service that personalizes content for each user based on their interests. Utilized technologies such as FastAPI, Kafka, HTTPX, Pydantic, and SQLAlchemy.
  - Deployed a chatbot service utilizing gRPC and the OpenAI API.

AIScaler

- Description: A labeling platform that improves the annotation process with the aid of automated tools.
- Responsibilities:
  - Employed Segment Anything Model to create an automatic segmentation feature.
  - Utilized 3D Slicer for the development of smoothing segmentation feature on DICOM images.

Infrastructure management

- Description: In charge of on-premise development and cloud infrastructure management.
- Responsibilities:
  - Moved develop development off the cloud for cost optimization, utilizing RKE2, and expose through Cloudflared.
  - Created CI/CD pipelines using Jenkins, Helm chart and ArgoCD.
  - In charge of managing AKS clusters in a production environment.

VNPT IT 2

Ho Chi Minh City, Vietnam

AI Engineer

Jan 2020 - Oct 2020

- Developed a face recognition system utilizing RetinaFace, ArcFace, and Faiss for attendance tracking.
- Built a user-friendly dashboard using Bootstrap, Vue.js, and FastAPI to oversee and visualize the face recognition process.
- Deployed Deep Learning models in production with NVIDIA Triton Server, while leveraging Grafana and Prometheus for effective monitoring of the Triton server..
- Engineered an automatic number plate recognition system capable of identifying license plates on vehicles through the stream from traffic cameras, achieving an impressive 83% accuracy. This performance significantly surpassed a major competitor at the time, which only achieved approximately 40% accuracy..

PROJECTS

Panorama - July 2019

- Create panorama from multiple images. Using ORB feature detector and RANSAC algorithm to find affine transformation between images then sticks them together with those transformation matrices.
- Language/Technology: Python, Scikit-Image, Numpy.

Chores Reminder - April 2018

- Implementing a hotspot captive portal on OpenWRT to temporarily restrict internet access for a user who is in charge of doing housework. A reward, such as a slideshow of girl images, is then provided upon task completion, restoring internet access.
- Languages/Technologies: Shell script, PHP, HTML/CSS/JavaScript.

UltraView (LAN) - March 2018

- A remote desktop program (like TeamViewer) but only works in LAN. Enables master control over a slave device, transmitting screenshots, mouse click details, mouse position, and keycode information via TCP. Written in C#.

Othello chess (Reversi) - June 2018

- Implemented the Minimax algorithm to develop a fundamental AI game.
- Language/Technology: C#, Unity.

Fish typing game - May 2018

- A small relaxing game where you can play with arrow key (similar to Gold Miner), and your goal is to catch fish.
- Language/Technology: C#, MonoGame.

REFERENCES

Mr. THANH-HAI NGUYEN — VINBRAIN JSC

Ho Chi Minh city, Vietnam

Senior Backend Engineer

- Em@il: hai [dot] nguyen [at] juve [dot] vn

Dr. HO, THI THAO NGUYEN — THESIS ADVISOR

Aalborg University, Denmark

Assistant Professor, ntth [at] cs [dot] aau [dot] dk

- “Biết chủ động trong công việc, cố gắng làm tốt nhất trong thời gian có thể, chịu khó tự học và có tinh thần làm việc tốt.”

Dr. NGOC-HOANG, LUONG

UIT — VNU-HCM, Vietnam

Lecturer, hoangln [at] uit [dot] edu [dot] vn

- “Nguyen Quoc Dat shows much potential to become a competent researcher. He’s not only resourceful in problem solving, but also conducts his assigned tasks in a rigorous manner. He’s very capable of finding out solutions in a bottom-up approach; he could thus be further trained to effectively analyze problems under concern from a top-down perspective. He’s sociable and good at teamwork. What he’s lacking at the current moment is an appropriate opportunity to professionally grow.”