NGHIA TRUNG NGUYEN (HE/HIM)

PhD Candidate in Computer Science ● Looking for SE, ML/AI Engineer, Data Scientist Roles

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EXPERIENCE

Graduate Research & Teaching Assistant
Prof. Bir Bhanu, UCR | 3D Person Identification, Computer Vision

📅 Apr 2023 - March 2024   📍 Riverside, CA

- Implemented and evaluated a person identification method on 3D meshes from RGB images using **local geometry shape features**.
- Research on **3D body models**, **human regression methods** and **objects classification methods**.
- **Averaged** SMPL-X shape parameters from **multiple images** to achieve **33% higher identification accuracy** vs. single image.

Software Engineer
FPT Telecom | Speech to Text, Airflow

📅 Jan 2022 – Aug 2022   📍 Ho Chi Minh, Vietnam

Built a ML model to detect Vietnamese keywords from audios in customer service using a **fine-tuned wav2vec2 model**.
- Achieved **state-of-the-art equivalent performance** with 4.4 WER on the Vivos dataset and 8.1 WER on the Commonvoice dataset.
- Reduced the time of automatic pipelines by **75%**, allowing the system to detect keywords from customer service audios in **real-time**.
- **Awarded the best employee in Q1/2022.**

Software Engineer
Zalo, VNG Group | CNN, Audio Processing, Search System

📅 Dec 2020 – Dec 2021   📍 Ho Chi Minh, Vietnam

- Created a system to index **9M music audios** for many tasks such as audio retrieval and audio de-duplication.
- Designed a **customized deep CNN, Siamese Network** to extract audio features and embed audios into a vector space.
- Detected similar audios (instrumental, remix, cover, etc) in a music database **accurately** and quickly (about **10 ms** per query).

Software Engineer Intern
Bosch | Business Solution, Supply Chain, Machine Learning

📅 May 2019 – Sep 2019   📍 Ho Chi Minh, Vietnam

- Found the optimal location of distribution centers (DCs) among **10K outlets** to optimize logistic costs and outlet revenues.
- Used **gradient descent** and a **customized loss function** to select k DCs that have the best locations and satisfy many defined criteria.

PROJECTS

Plagiarism Detection | NLP, Transformer, Flask, Angular, Azure
- Engineered a plagiarism detection web for Vietnamese (VN) and English (EN) academic papers, saving researchers **40+ hours monthly**.
- Fine-tuned **multilingual BERT model** to detect similarities between VN/EN sentences and achieve **82% Pearson correlation** on STS-B.

Cloud Load Balancing | Nodejs, Python FastAPI, Rust Actix, Jmeter, Hey, Grafana, Prometheus, Nginx, Docker Swarm, K8s, GCP
- Set up **10+ API servers** to evaluate load balancing in **5+ cloud techniques** including Nginx, K8s and Docker Swarm.

Get Link Website | Angular, Go, PostgreSQL, Nginx, K8s
- Manage automated get link process for premium users, **saving huge time** compared to the official website.

SUMMARY

- **Experienced in machine learning model development, and algorithm design.**
- **Skilled in software engineering with Python, Go, Angular, Posgres, Nginx, and K8s.**
- **Key roles in multiple deep learning and data science projects, with many achievements.**

EDUCATION

PhD Candidate in Computer Science
University of California, Riverside (UCR)

📅 March 2027

- Research on Video Scene Graph Generation under Prof Bir Bhanu's guidance.

Master in Computer Science
University of California, Riverside (UCR)

📅 March 2024   📍 GPA: 3.55 / 4.0

- $1^{st}/2^{nd}$ **Prizes (over 100 teams) at UCR Programming Challenges 2023/2022.**
- Related courses: Deep Learning (A); Machine Learning (A); Data Mining Techniques (A); Design and Analysis Algorithms (A).

BS in Computer Science - APCS[1]
Ho Chi Minh University of Science (HCMUS)

📅 Nov 2020   📍 GPA: 3.45 / 4.0

- **HCMUS IT Faculty Scholarship 2016.**
- Related courses: NLP (A+); Computer Vision (A); Coursera Deep Learning.

High School - Math Specialized
High School for Gifted Students, Vinh Uni

📅 Aug 2016   📍 GPA: 8.8/10 (Top 1%)

- **Scholarships of National Key Program for Mathematical Development 2015.**
- **Third Prize, Provincial Math Contest 2015.**

SKILLS

- **Language:** Python, C++, Go, Rust, Java, C#
- **Web:** Typescript, HTML, CSS, JavaScript
- **Framework:** Angular, FastAPI, Flask, React
- **DL Framework:** PyTorch, TensorFlow
- **Databases:** PostgreSQL, MongoDB
- **Tech:** K8s, Nginx, Prometheus, Grafana, Airflow, Kafka, Docker Swarm
- **Cloud:** Azure, AWS, GCP, Vultr

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[1] Advanced Program in Computer Science (HCMUS) - Top 1 entrance scores in Southern Vietnam.