

NGHIA TRUNG NGUYEN (HE/HIM)

PhD Candidate in Computer Science • Looking for PhD Research, ML/AI Engineer, SE Intern Roles

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EXPERIENCE

Graduate Research & Teaching Assistant

Prof. Bir Bhanu, UCR | Computer Vision, 3D Understanding

📅 Sep 2022 - Present 📍 Riverside, CA

- Developed **3D person identification** pipeline using local geometry features from RGB-reconstructed SMPL-X meshes.
- Achieved **33% improvement** in identification accuracy by aggregating SMPL-X shape parameters across multiple images.
- Research on **Video Scene Graph Generation** and **Event-Based Object Detection**. 2 papers waiting for review at CVPR 2026.

Software Engineer

FPT Telecom | Speech Recognition, Model and Pipeline Optimization

📅 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 Q1/2022**.

Software Engineer

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

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

- Architected audio retrieval system indexing **9M tracks** for similarity search and de-duplication.
- Designed custom **Siamese CNN** to learn audio embeddings, achieving **<10ms query latency** for real-time matching.
- Built robust detection for audio variants (covers, remixes, instrumentals) with over **90% precision and recall** across diverse genres.

Software Engineer Intern

Bosch | Business Solution, Supply Chain, Machine Learning

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

- Developed optimization algorithm to find optimal distribution center locations among **10K+ outlets** using **gradient descent with custom loss functions**.

PROJECTS

Cross-Language Plagiarism Detection | Natural Language Processing, Flask, Angular, Azure

- Built plagiarism detection system for Vietnamese-English academic papers, saving researchers **40+ hours monthly**.
- Fine-tuned **multilingual BERT** for cross-lingual similarity, achieving **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 | SolidJS, 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 for speech recognition, audio retrieval, and computer vision at scale.
- Skilled in software engineering** with Python, Go, SolidJS, PostgreSQL, Nginx, and K8s.
- Research foundation** with 2 papers waiting for review at CVPR 2026.

EDUCATION

PhD Candidate in Computer Science

University of California, Riverside (UCR)

📅 Expected 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

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

BS in Computer Science - APCS¹

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

- ML/DL:** PyTorch, Huggingface, WanDB, Decord
- Language:** Python, Go, Rust, C++, Java
- Infra:** K8s, Docker, Nginx, Grafana, Airflow, Prometheus
- Cloud:** Vultr, Azure, AWS, GCP, Contabo
- Web:** SolidJS, Angular, FastAPI, Flask
- Databases:** PostgreSQL, MongoDB

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