CURRICULUM VITAE

PERSONAL INFORMATION

DUONG Ly Cao

🏛 Senior AI Researcher, Vision-in
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Gender Male | Date of birth 16/02/1995 | Nationality Vietnamese

I graduated from Ho Chi Minh City University of Technology and subsequently attained a Master's degree from Pukyong National University in Busan, South Korea, specializing in Electrical & Biomedical Engineering. My academic pursuits have predominantly revolved around signal processing and image processing, particularly within the domains of Automation Systems and Medical Devices. Currently, I serve as a Senior AI Research Engineer at Vision-in, where I am committed to diligently fulfilling my professional responsibilities.

EDUCATION

From September 2018 to September 2021

Pukyong National University, Busan, Republic of Korea

Master's degree in Electrical and Biomedical Engineering
Graduated date: 08/2020
GPA: 4.25 / 4.5

From August 2013 to April 2018

Ho Chi Minh City University of Technology

Bachelor's degree in Biomedical Engineering
GPA: 8.0 / 10.0

WORK EXPERIENCE

From June 2022 to now

Senior AI Researcher at Vision-in Inc.
   Responsibility:
My professional responsibilities encompass research, development, and deployment of deep learning models in the field of Surveillance. Additionally, I provide support to the platform team in optimizing model inference, improving processing time, and increasing the number of channels on multi-platform environments.
   Projects:
- Fire and smoke synthetic images generation based on Diffusion and ControlNet
- Human searching based on image description model
- Fire, moke, and human actions detection with limited datasets enhanced with contrastive learning pretrained model
- Developing cross-platform plugins for NX Witness

- Optimizing resources by deploying models and platform on Edge devices (NVIDIA jetson board)

From October 2021 to June 2022	**AI Research Engineer at AIDOT Inc.**

Responsibility:

Developing deep learning models (detection, classification, segmentation) for ultrasound Carotid Artery diseases.
Optimizing and Quantization models on tablet devices.

TECHNICAL SKILL

Programming Languages	Python	C++	JavaScript
	9/10	7/10	6/10
AI Tools/ Platforms	Pytorch	ONNX Runtimes	Tensorflow
	8/10	8/10	7/10
Others	VTK Toolkit	NX Witness Plugin	Docker
	7/10	8/10	7/10

ADDITIONAL PROJECTS

Projects

Facial Recognition (2024)

Responsibility:

Developing a facial recognition API server with FastAPI for a check-in/check-out system in Vangtat Mining (Laos) involves several key components: managing user IDs, enrolling user faces, and verifying them via a tablet camera.

Fcg-Former Hugging Face Deployment (2024)

Responsibility:

Deployment of Fcg-Former (Publication paper) on Hugging Face platform for open source contribution in biomedical and chemical research:
https://huggingface.co/spaces/lycaoduong/FcgFormerApp

3D Photoacoustic Visualize Software (2021)

Responsibility:

Developing a 3D viewer software for photoacoustic imaging with VTK (Visualization Toolkit) engine can provide a versatile and powerful visualization tool for analyzing photoacoustic imaging data. Creating software that supports various medical data formats including DICOM, NRRD, and TDMS.

HONORS AND AWARDS

Study encouragement scholarship of 131, 141, 151, 172 semester, Ho Chi Minh City University of Technology
Incentive award The 2017 Eureka Student Research Competition with project "Model of colposcopy using polarized light and effective early"