DANG THE HUNG

linkedin.com/in/dthung | github.com/dthung99 | the_hung.dang@kcl.ac.uk | +4477-833-12525 | London, UK

PROFILE

I am passionate about Mathematics and Programming and how Engineers use them to solve real-world problems. This passion led me to switch my career from Medicine to Engineering after earning an MD degree.

EDUCATION

King's College London | United Kingdom 2023 – Present

- Biomedical Engineering MSc – CPGA: 8.1/10.
- Modules: Advanced Medical Robotics, Applied Medical Robotics, Medical Robotics – Theory and Applications, Image Guided Navigation for Robotics, Advanced Machine Learning.

University of Medicine and Pharmacy at Ho Chi Minh City | Viet Nam 2017 – 2023

- Doctor of Medicine – 3.25/4.0 – Distinction.

PROJECTS

University MSc project | King's College London, United Kingdom 2023 – 2024

Thesis: Design a concentric tube robot for eye surgery and build a 3D tracking system for the robot

- CAD-designed and developed a computer vision system for 3D tracking of a continuum robot.
- **Skills**: Robot Operating System (ROS), Linux, Computer Vision, OpenCV, CAD, Finite Element Analysis.

Implementation many deep learning architectures from scratch: GitHub link 1, GitHub link 2, GitHub link 3

- Implemented many deep learning concepts and architectures from scratch.
- Achieved a deep understand of both the mathematics theory and the techniques' application.
- **Skills:** PyTorch, Deep Learning, Big Data, Memory Management, Data Augmentation, Optimization.

Path planning software for brain biopsy (Module: Image Guided Navigation for Robotics): GitHub

- Created a program to plan a path for needle biopsy and simulated the insertion process in ROS.
- Final results: 8.3/10.
- **Skills:** ROS, Linux, C++, Python, Test-driven development, Software Development, Software Design, Version Control, Reading Source Code and Documentation, 3D graphics, MoveIt, RViz, Motion Planning.

Controlling a 3 degree-of-freedom robot (Module: Advanced Medical Robotics): GitHub

- Controlled a 3 degrees of freedom robot and built a haptics device.
- Final results: 7.9/10.
- **Skills:** Linux, ROS, Python, Distributed Control System, Control Theory, Optimization, Robotics.

Building a 2 degree-of-freedom drawing robot (Module: Applied Medical Robotics): GitHub

- Designed and built a control system for 2 degrees of freedom planar robot.
- Final results: 8.9/10.
- **Skills:** MATLAB, C++, CAD, Serial Communication, Electronics Assembly, Sensor and Actuation Integration, Path Planning, Optimization, Verification and Validation.

Online courses: CS50's Introduction to Computer Science | Harvard 2024

- **Skills:** C, HTML, JavaScript, CSS, SQL, Computer Science, Data Structures, Algorithm.

WORK EXPERIENCE

Research Assistant & Data analyst | Online Research Club, Nagasaki, Japan 2019 – 2023

- Led all stages of medical research, mainly systematic reviews and meta-analyses; specialized in data analysis.
- Co-ordinated teams of up to 20 people, pushing many projects from near-abandonment to successful publication.
- Published 9 papers, being first author on 2 papers (scholar.google.com).

COMPETENCY

- Awarded 15+ medals in different Mathematics contests in high school.
- Languages: Python, C++, R, MATLAB, with basics in C, JavaScript, CSS, HTML, VBA, and SQL (Link).
- Technology: Ubuntu Linux, Git, MySQL, MongoDB, CAD, FAE, 3D printing, Machine Learning.