

Hai NGUYEN

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🌐 [Website](#)

🐙 [Github](#)

in [LinkedIn](#)

EDUCATION

Northeastern University (NEU), USA

Ph.D. in Deep Reinforcement Learning in Robotics (3.93/4.0),

Sep. 2019 - Present

Boston, MA, USA

University of Southampton (UoS)

2016-2017

M.Sc. in Unmanned Aircraft Systems Design (Distinction)

Southampton, UK

Hanoi University of Science and Technology (HUST)

2007-2012

B.Sc. in Control and Automation Engineering

Hanoi, Vietnam

ENGINEERING SKILLS

Languages: Matlab, C/C++, Python, C#

Technologies/Frameworks: PyTorch, Numpy, OpenCV, Linux, ROS, MuJoCo, Gazebo, Arduino, Github

WORK EXPERIENCE

LLPR Lab & Helping Hands Lab, Northeastern University

Sep. 2019 - Present

Reinforcement Learning (RL) in Robotics under Partial Observability Advisors: Prof. C. Amato, Prof. R. Platt

- Leveraged privileged information (states, beliefs) during training for efficient policy learning
- Developed a hierarchical RL agent: memory-based top policy and memory-less bottom policy
- Utilized drop-out networks to scale Bayesian-Adaptive RL for planning under partial observability

ARA Lab, University of Nevada, Reno

Sep. 2018 - Jun. 2019

Research Assistant in Robot Manipulation

Advisor: Prof. H. M. La

- Developed an RL mobile robot agent to open doors autonomously from RGB images
- Developed a YOLOv3-based object detector using thermal images for team **CERBERUS** to deploy on drones (later won the **DARPA Subterranean Challenge** in 2021)

Viettel Aerospace Institute, Vietnam

2012-2016 & 2017-2018

Flight Software Engineer

- Developed control & path planning algorithms for an FPGA-based autopilot for fixed-wing drones
- Implemented control software allowing a quad-plane to perform fixed↔rotary-wing on flight

SELECTED PUBLICATIONS (8 FULL PUBLICATIONS)

“**Leveraging Fully Observable Policies for Learning under Partial Observability**”, *The 6th Conference on Robot Learning (CoRL)*, 2022

“**Hierarchical Reinforcement Learning under Mixed Observability**”, *The 15th International Workshop on the Algorithmic Foundations of Robotics (WAFR)*, 2022

“**BADDr: Bayes-Adaptive Deep Dropout RL for POMDPs**”, *The 21st International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2022

“**Belief-Grounded Networks for Accelerated Robot Learning under Partial Observability**”, *The 4th Conference on Robot Learning (CoRL)*, 2020

AWARDS

Chevening Scholarship, British Foreign and Commonwealth Office (2% acceptance rate)

2016

IMechE UAS 2016 Challenge - Runner-up & Navigation Accuracy Award

2017

Graduate Dean's Merit Scholarship, University of Nevada, Reno (\$10k)

2018

Travel & Accommodation Grant (WAFR)

2022