Thang Duong

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RESEARCH INTERESTS

Bandits, Reinforcement learning, Meta-learning, Representation learning, and Transfer learning.

EDUCATION

The University of Arizona - Computer Science Department　　　　　　　　**Tucson, Arizona**
PhD Student　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Aug 2022 - Now*
- **Sequential Multitask Representation Transfer in Bandit**, supervised by Prof. Chicheng Zhang

Hanoi University of Science and Technology　　　　　　　　　　　　　　**Hanoi, Vietnam**
B.S.E in Mechatronics Engineering, Advanced Program
GPA: 3.07/4.00 (Top 5% of the program)

VinAI Research　　　　　　　　　　　　　　　　　　　　　　　　　　**Hanoi, Vietnam**
AI Research Resident　　　　　　　　　　　　　　　　　　　　　*July 2019 - June 2022*
- **Meta-Reinforcement Learning** and **Bandits**, supervised by Dr. Yasin Abbasi-Yadkori and Dr. Tung Pham
- **Active Learning** and **Domain Adaptation**, supervised by Dr. Toan Tran, Dr. Trung Le, and Prof. Dinh Phung
- **Sim-to-Real Data Augmentation**, supervised by Dr. Rang Nguyen

Publications

Beyond task diversity: Provable representation transfer for sequential multi-task linear bandits
Thang Duong, Zhi Wang, Chicheng Zhang
NeurIPS 2024: [Paper] [Github]

Non-stationary Bandits and Meta-Learning with a Small Set of Optimal Arms
*MJ Azizi, **T Duong**, Yasin Abbasi-Yadkori, András György, Claire Vernade, M. Ghavamzadeh*
RLC 2024 Conference: [Paper] [5 mins summary] [Github]

Association Of Mri-defined Structure Features At Baseline With Knee Pain Trajectories
*S. Liu, X. Sun, Y. Ge, **Thang Duong**, C.K. Kwoh*
ACR Convergence 2024: [Paper]

OTHER RESEARCH EXPERIENCE

Precision Mechanical and Optical Engineering Department - HUST　　　**Hanoi, Vietnam**
Project lead　　　　　　　　　　　　　　　　　　　　　　　　　*Jan 2018 - June 2019*
- (PRESM 2019 conference) Deep Regression for precise geometric dimension measurement
- (INISCOM 2018 conference and Thesis) Analyzing seismic signal using SVM for vehicle motion detection

National Chung Cheng University　　　　　　　　　　　　　　　　　**Chiayi, Taiwan**
Intern　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*June 2016*
- Summer Internship: 3D scanner calibration

Sun Moon University　　　　　　　　　　　　　　　　　　　　**Asan, South Korea**
Intern　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*July 2015*
- Summer Internship: ECG signal processing and Robot Control Programming

WORK EXPERIENCE

The University of Arizona - Computer Science Department Tucson, Arizona
Graduate Assistant *August 2022 - Now*
- Teaching Assistant for CSC 445: Introduction to Algorithms and CSC 296: Introduction to Artificial Intelligence.
- Research Assistant.

VinAI Research Hanoi, Vietnam
Junior Engineer *July 2019 - Dec 2019*
- Developed the front-end for the 3D Face Reconstruction demo at NeurIPS 2019 (Android, OpenGL 2.0)

NAL Vietnam JSC Hanoi, Vietnam
AI Team leader, Scrum master *May 2018 - June 2019*
Managing a team of six members to deliver multiple products:
- Chatops: https://chatops.vn/en/
- Facial recognition, Vietnamese Text2Speech and Speech2Text
- Other Proof-of-Concept projects: OCR, Defect detection, Grammar correction, etc.

FPT Software Hanoi, Vietnam
Technical leader *Apr 2017 - Sep 2017*
Lead a team of three members to make multiple proof-of-concept projects
- R&D project: Application using OpenCV object detection and tracking on smart phone in a cross-platform app with Xamarin

Hanoi University of Science and Technology Hanoi, Vietnam
Student *July 2015 - June 2018*
- Embedded system projects & science fair: public lighting system using Solar energy (Arduino)

Certificates

TOEFL
Overall: 107 - Reading: 30, Listening: 30, Writing: 26, Speaking: 21 *Nov 2021*
GRE
Quantitive: 169, Verbal: 156, Analytical Writing: 4.0 *Oct 2021*
Erasmus full scholarship Valencia, Spain
Exchange program to Universitat Politècnica de València *Sep 2016 - Jan 2017*

PROJECTS

Bandit Meta Learning: Increasing the optimization's efficiency by exploiting the shared structure between multiple instances of an online-learning problem.

Active Domain Adaptation: Adapting from Source to Target Domain using Active Learning to warm-start and improve baseline algorithms.

Sim-to-Real Data Augmentation: a hierarchical model to generate adverse weather images from the CARLA simulation for different Autonomous Driving tasks. This helps disentangle the content and style more effectively than some baselines.

REFERENCES

Professor. Chicheng Zhang
University of Arizona
✉ chichengz@cs.arizona.edu

Dr. Yasin Abbasi-Yadkori
Senior Research Scientist at Deepmind
✉ yadkori@google.com

Professor. Mai Nguyen Thi Phuong
Hanoi University of Science and Technology
✉ mai.nguyenthiphuong@hust.edu.vn

Dr. Tung Pham
VinAI Research Scientist
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