

# Luong Thai Khang

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## SUMMARY

B.Sc. graduate in Computer Science from Hanoi University of Science and Technology (July 2026). My research focuses on bandits, reinforcement learning, and decision-making under uncertainty. I am first author of papers at ICML 2026 and NeurIPS 2026 (Spotlight), and I am seeking Master/Ph.D. opportunities and research collaborations in bandit theory, reinforcement learning, offline/robust decision-making, and statistical learning theory.

## EDUCATION

- **Hanoi University of Science and Technology (HUST)** 2022 – Jul. 2026  
Hanoi, Vietnam  
*B.Sc. in Computer Science*
  - GPA (CPA): 3.73/4.0

## PUBLICATIONS AND MANUSCRIPTS

- **Variance Driven Exploration: A Provable and Efficient Methodology for Pure Exploration in Highly Stochastic Environments**  
*Khang Luong, Nam Nguyen, Hoang Ta, Hung The Tran, Tuan Quang Dam.*  
ICML 2026 (Regular). [arXiv:2608.21995](https://arxiv.org/abs/2608.21995)
- **Nearly Optimal Fixed-Confidence Best-Arm Identification with 1-Bit Feedback**  
*Khang Luong, Dinh Thai Son, Hoang Ta, Hung The Tran, Tuan Quang Dam.*  
NeurIPS 2026 (Spotlight). [arXiv:2610.02771](https://arxiv.org/abs/2610.02771)
- **Minimax Optimality for Factored Optimal-Transport Distributionally-Robust Policy Learning in Contextual Bandits**  
*Khang Luong, Trung Nguyen, Hoang Ta, Tuan Quang Dam, Hung Tran-The.*  
ICLR 2027 Conference Submission.
- **What Action Geometry Buys: A Design Space for Optimal-Transport Bellman Backups**  
*Trung Nguyen, Khang Luong, Tuan Quang Dam.*  
ICLR 2027 Conference Submission.
- **Instance-dependent  $\beta$ -Optimality for Best-Arm Identification under One-Bit Threshold Feedback**  
*Dinh Thai Son, Khang Luong, Hoang Ta, Tuan Quang Dam.*  
AISTATS 2027 Conference Submission.

## EXPERIENCE

- **VinDynamics** Jun. 2025 – May 2026  
Hanoi, Vietnam  
*AI Intern (Robotics)*
  - Worked on perception and control pipelines for robotic grasping and hand-object interaction.
- **FPT Quantum AI & Cyber Security Institute** Jun. 2026 – Present  
Hanoi, Vietnam  
*Research Member*
  - Conducting research on offline policy evaluation and learning for contextual bandits.

## PROJECTS

- **Variance Driven Exploration (VarDE)**  
*Hanoi University of Science and Technology (HUST)*
  - Derived influence-weighted variance-driven sampling rules for exploration frameworks, providing theoretical guarantees on variance decay and simple regret.
  - Applied VarDE to Best-Arm Identification, Monte Carlo Tree Search, and Best-Policy Identification.
- **Best-Arm Identification (BAI) with 1-Bit Feedback**  
*Hanoi University of Science and Technology (HUST)*
  - Developed a BAI algorithm with 1-bit mean-estimation, matching worst-case lower bound for 1-bit feedback.
  - Currently extending to instance-dependent bounds and asymptotically optimal parametric algorithms.

- **Offline Policy Evaluation and Learning for Contextual Bandits**

*FPT Quantum AI & Cyber Security Institute*

- Study distributionally robust offline contextual bandits under context shift and reward shift.
- Develop pessimistic offline policy evaluation and learning methods based on optimal-transport DRO objectives.

- **Vision-Based Robotic Hand Teleoperation and Autonomous Manipulation**

*VinDynamics*

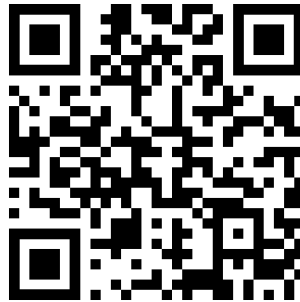
- Developed a vision-based teleoperation system for dexterous robotic hand control.
- Integrated visual perception with control policies for autonomous object manipulation.

## SKILLS

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- **Mathematics:** Probability Theory, Optimization, Linear Algebra, Calculus
- **Machine Learning:** Reinforcement Learning, Bandits, Deep Learning
- **Programming:** Python, PyTorch, TensorFlow, C++
- **Languages:** English (IELTS 7.0)

## Online Profile



[luongkhang04.github.io/profile](https://luongkhang04.github.io/profile)