

# Bao Nguyen

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## EDUCATION

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### Hanoi University of Science and Technology

Hanoi, Vietnam

*Bachelor in Computer Science (Talented Programme); CPA: 3.85/4.00*

*Sep 2019 – Sep 2023*

- Thesis: Multi-agent reinforcement learning strategy to maximize the lifetime of WRSNs.
- Advisor: Prof. Huynh Thi Thanh Binh
- Honors: Excellent ( 1st class honors).

### Van Giang High School

Van Giang, Hung Yen

*High School Diploma; GPA: 9.0/10.0*

*Sep 2016 – Sep 2019*

## WORK EXPERIENCE

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### VinUniversity

Hanoi, Vietnam

*Research Assistant*

*April 2023 – Present*

- Advisor: Prof. Viet Anh Nguyen, Prof. Khoa Doan

### Hanoi University of Science and Technology

Hanoi, Vietnam

*Research Assistant*

*Jul 2022 – Apr 2023*

- Advisor: Prof. Huynh Thi Thanh Binh

## PUBLICATIONS

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**Bao Nguyen**, Binh Nguyen, Hieu Trung Nguyen, Viet Anh Nguyen. Generative Conditional Distributions by Neural (Entropic) Optimal Transport. International Conference on Machine Learning (ICML), 2024.

**Bao Nguyen**, Binh Nguyen, Viet Anh Nguyen. Bellman Optimal Step-size Straightening of Flow-Matching Models. International Conference on Learning Representations (ICLR), 2024.

**Bao Nguyen**, Viet Anh Nguyen. Efficient Failure Pattern Identification of Predictive Algorithms. In Conference on Uncertainty in Artificial Intelligence (UAI), 2023.

Nguyen Thanh Long, Tran Thi Huong, **Nguyen Ngoc Bao**, Huynh Thi Thanh Binh, Phi Le Nguyen, Kien Nguyen. Q-learning-based distributed multi-charging algorithm for large-scale WRSNs. In Nonlinear Theory and Its Applications Journal, IEICE, 2023.

Le Van Cuong, **Nguyen Ngoc Bao**, Nguyen Khanh Phuong, Huynh Thi Thanh Binh. Dynamic perturbation for population diversity management in differential evolution. In Proceedings of the Genetic and Evolutionary Computation Conference Companion (GECCO), 2022.

Tran Thi Huong, **Nguyen Ngoc Bao**, Ngo Minh Hai, Huynh Thi Thanh Binh. Effective partial charging scheme for minimizing the energy depletion and charging cost in wireless rechargeable sensor networks. In IEEE Congress on Evolutionary Computation (CEC), 2021.

Le Van Cuong, **Nguyen Ngoc Bao**, Huynh Thi Thanh Binh. A multi-start local search algorithm with l-shade for single objective bound constrained optimization. Report at Competition on Single Objective Bound Constrained Optimization in the Genetic and Evolutionary Computation Conference Companion (GECCO), 2021.

Hue Thi Tran, **Bao Nguyen**, Nguyen Tran Nhat Quoc, Pham Phu Manh, Nguyen Khanh Phuong, Huynh Thi Thanh Binh, Dang Quang Thang. The Vehicle Routing Problem with Drones and Flexibility Demands. In IEEE Congress on Evolutionary Computation (CEC), 2024.

## PREPRINTS

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**Bao Nguyen**, Binh Nguyen, Duy Nguyen, and Viet Anh Nguyen. Semantically-Consistent, Distributional Intervention Policies for Language Models. Under Review.

Duy Nguyen, **Bao Nguyen** and Viet Anh Nguyen. Cost Adaptive Recourse Recommendation by Adaptive Preference Elicitation. Under Review.

**Bao Nguyen**, Tran Thi Huong, Huynh Thi Thanh Binh, Le Trong Vinh. Asynchronous multi-agent reinforcement learning-based general charging scheme for connected target coverage maximization. Under review.

Tran Thi Huong, **Bao Nguyen**, Vo Khac Hiep, Le Trong Vinh, Huynh Thi Thanh Binh. Adaptive periodic charging scheme using hybrid fuzzy state-based reinforcement learning in WRSNs. Under review.

## PROJECTS

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**Generative AI Technologies for Gynecological Healthcare in Vietnam** | [Link](#)

- This project funded by The Bill & Melinda Gates Foundation aims to build a conversational AI chatbot to scale up gynecological healthcare support for women and LGBT+ communities in Vietnam

**Bot game MarioBros based on imitation learning and reinforcement learning** | [Github](#)

**Stock Price Prediction for Vietnamese stock market** | [Github](#)

## AWARDS & ACHIEVEMENTS

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<b>ICLR 2024 Travel Grant (2,300 Euro)</b> <i>International Conference on Learning Representations (ICLR)</i>	Vienna, Austria Mar 2024
<b>Top 13 out of 216 in the Vietnam Winter Alphathon 2023</b> <i>WorldQuant Brain</i>	Hanoi, Vietnam Sep 2023
<b>The third place in the Face Analysis Challenge</b> <i>PIXTA Vietnam, Cohost AI và Viblo</i>	Hanoi, Vietnam Sep 2023
<b>Runners-up in NESTQUANT Tournament</b> <i>NestQuant Incorporation</i>	Hanoi, Vietnam Jul 2023
<b>UAI conference scholarship</b> <i>Association for Uncertainty in Artificial Intelligence</i>	Carnegie Mellon University, Pittsburgh, PA, USA Jun 2023
<b>International Quant Championship 2023</b> <i>WorldQuant Brain</i>	Hanoi, Vietnam Apr 2023
<b>Study encouragement scholarship</b> <i>Hanoi University of Science and Technology</i>	Hanoi, Vietnam Jul 2021, Jan 2022, Jun 2022, Jan 2023
<b>Scholarship from Lotte Corporation</b> <i>Lotte Corporation</i>	Hanoi, Vietnam Jun 2022
<b>The 4<sup>th</sup> prize of Competition Single Objective Bound Constrained Optimization</b> <i>Association for Computing Machinery Special Interest Group (SIGEVO)</i>	New York, US Aug 2021, Jun 2022
<b>Scholarship from Vietnam Gas Corporation</b> <i>Vietnam Gas Corporation</i>	Hanoi, Vietnam Jun 2021
<b>Top 5 students with highest scores in National University Entrance Exam</b> <i>Vietnam Ministry of Education</i>	Hanoi, Vietnam Sep 2019

## The Silver Medal of Mathematics National Exam

*Vietnam Ministry of Education*

Vietnam

*Jan 2017*

## The consolidation prize in the Science and Technology National Contest

*Vietnam Ministry of Education*

Vietnam

*Jan 2017*

## LICENSES & CERTIFICATIONS

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### IELTS Academic 7.0 (All skills are above 6.0)

*British Council*

Hanoi, Vietnam

*Issued Nov 2023 · Expires Nov 2025*

### TOEIC 900

*IIG Vietnam*

Hanoi, Vietnam

*Issued Sep 2023 · Expires Sep 2025*

## SKILLS

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**Programming:** Python, C, C++, Java, MATLAB, SQL

**Technologies:** Pytorch, TensorFlow, Git, Docker, SSH, Spark, Hadoop

**Languages:** Vietnamese (Native), English (Intermediate)

## PROFESSIONAL SERVICES

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Reviewer at NEURIPS(2023), ICLR(2024), ICML (2024)