

Nguyen Viet Tuan Kiet

Preferred name: Kiet (俊杰) | Also published as Kiet T. Nguyen Viet

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Interests

- Computer Vision
- Large Language Models
- Automated Algorithm Design
- Informed Machine Learning
- Causal Modeling
- Representation Learning
- Reinforcement Learning
- Machine Learning Theory

Education

Hanoi University of Science and Technology (HUST)

Sep 2022 – Jun 2026 (Expected)

Bachelor of Science in Computer Science – Talented Program

- Cumulative GPA: **3.9/4.0** (First Class Honors)
- Coursework in AI: Introduction to Artificial Intelligence (A), Introduction to Machine Learning and Data Mining (A, project: 10/10), Deep Learning and Its Applications (A)
- Coursework in Mathematics: Algebra (A+), Calculus I–III (A/A/A+), Discrete Mathematics (A), Introduction to Optimization Methods (A), Probability and Statistics (A), Planning Optimization (A)
- *Talented Program: elite selective program for the top 40 highest-performing students.*
- *HUST is one of Vietnam's top institutions for Data Science and AI.*

Undergraduate Research Thesis

Automated Design of Algorithmic Components via Turn-Based Dual-Agent Tree Search

Advisor: Prof. [Huynh Thi Thanh Binh](#) | Advisor 10; Reviewer 10; Committee 10, 10, 9.5 (Avg. 9.8).

Best Presentation Award (top 5%; nominated by the Optimization Committee).

Bac Giang High School for the Gifted (Top 10 specialized high schools)

2019 – 2022

High School Diploma – Mathematics Specialty

Publications

Full Papers

MOTIF: Multi-strategy Optimization via Turn-based Interactive Framework

Nguyen Viet Tuan Kiet, Dao Van Tung, Tran Cong Dao, Huynh Thi Thanh Binh

AAAI 2026 (A*) · Main Technical Track. **Oral Presentation** (top 3%; acceptance rate 17.6%) [[Paper](#)] · [[Code](#)]

- Proposed a novel framework integrating large language models with Monte Carlo tree search for automated multi-strategy algorithm design in combinatorial optimization
- Developed a two-agent game-theoretic system enabling cooperative and competitive interactions for optimization code generation through hierarchical search space exploration

Back to the Beginning of Heuristic Design: Bridging Code and Knowledge with LLMs

Nguyen Viet Tuan Kiet, Bui Dinh Pham, Dao Van Tung, Tran Cong Dao, Huynh Thi Thanh Binh

Under review (A)* · Workshop on Deep Learning for Code, ICML 2026. 75 pages [[Paper](#)]

- Proposes a novel perspective on LLM-based code generation, particularly in automated heuristic design, supported by new theoretical insights and diverse empirical evaluations

Short Papers

Early versions of core ideas; extended versions are developed into main-track papers.

MAPLE: Multi-Agent Prior Learning for Constructing Tree Ensembles

Nguyen Viet Tuan Kiet, Nguyen Ba Thinh, Huynh Thanh Trung, Pham Huy Hieu

ICLR 2026 (A*) · Workshop on Multi-Agent Learning and Its Opportunities in the Era of Generative AI [Paper]

- Integrates LLM-derived feature priors into tree-ensemble construction through multi-agent learning, improving robustness and scalability on tabular data.

Predictive Spectral Calibration for Source-Free Test-Time Regression

Nguyen Viet Tuan Kiet, Huynh Thanh Trung, Pham Huy Hieu

CVPR 2026 (A*) · Workshop on Test-Time Scaling for Computer Vision [Paper]

- Proposes a simple source-free, model-agnostic TTA framework that combines predictive-support alignment with spectral-slack calibration for robust image regression under severe shifts.

RELIC: Revealed Principles for Learning Interpretable Composable Skills in Multi-Agent Planning

Nguyen Viet Tuan Kiet*, Bui Dinh Pham*, DQ Chinh, DV Tung, TC Dao, Huynh Thi Thanh Binh

ICML 2026 (A*) · Workshop on Planning in the Era of LLMs [Paper]

- Introduces a privacy-preserving framework for multi-agent planning, enabling agents to improve private programmatic skills and transfer successful behaviors through interpretable principles rather than shared code.

SLEEP: Simulated Future Learning Environments for Automated Evolution of Heuristic Portfolios

Nguyen Viet Tuan Kiet*, Nguyen Huu Duc*, Tran Cong Cao*, Bui Trong Duc, Huynh Thi Thanh Binh

ICML 2026 (A*) · Workshop on Deep Learning for Code [Paper]

- Introduces continual heuristic portfolio learning and a sleep-wake framework that trains compact LLM-generated heuristic portfolios for nonstationary combinatorial optimization under distribution shift and delayed feedback.

Automated Neurosymbolic World Modeling via Law Evolution and Neural Correction

Nguyen Viet Tuan Kiet*, Duong Quoc Chinh*, NH Duc, BD Pham, TC Dao, Huynh Thi Thanh Binh

RSS 2026 (A*) · Workshop on Robot World Models [Paper]

- Introduces an automated neurosymbolic world-modeling framework that evolves interpretable symbolic dynamics laws and refines them with neural corrections for continuous-control planning.

Research Experience

Undergraduate Research Assistant

Jun 2024 – Present

Modeling, Simulation & Optimization Lab, BKAI Research Center, Hanoi, Vietnam

- Advisor: Prof. [Huynh Thi Thanh Binh](#)
- Developing LLM-guided frameworks for automated algorithm design in combinatorial optimization
- Research on evolutionary algorithms for multi-task optimization problems

Undergraduate Research Assistant

Dec 2025 – May 2026

VinUni-Illinois Smart Health Center, VinUniversity, Hanoi, Vietnam

- Advisors: Asst. Prof. [Pham Huy Hieu](#), Asst. Prof. [Huynh Thanh Trung](#)
- Conducting research on emerging problems in computer vision and representation learning
- Exploring test-time scaling and adaptation techniques for improved model generalization

Industry Experience

AI Engineering Intern

Jul 2025 – May 2026

Vingroup AI Engineer Training Program, Vingroup Corporation

- Applied machine learning methods to real-world AI projects in CV and NLP
- Gained hands-on experience with production ML pipelines and deployment
- Ranked among the top 5 trainees in the program
- *Highly competitive flagship engineering training program.*

- Completed intensive AI training program under mentorship of industry experts
- Collaborated on applied AI research projects
- *Highly competitive flagship engineering training program.*

Honors & Awards

First Prize – GECCO 2024 Numerical Global Optimization Competition International competition on GNBG-generated test suite	2024
First Prize – National Mathematics Olympiad for University Students Calculus Division, Group A	2023
First Prize (Champion) – Hanoi Mathematical Modeling Competition Topic: Modeling the impact of storms on fish production and fishing vessels	2023
Second Prize – Student Creative Ideas Challenge (SCIC), SOICT Project: Digital Library for Children	2023
Second Prize – Vietnam Mathematical Olympiad (VMO) National High School Competition for Excellent Students in Mathematics; Top 50 candidates participating in Team Selection Test (TST)	2022
Consolation Prize – Vietnam Mathematical Olympiad (VMO) National High School Competition for Excellent Students in Mathematics	2021
Type A Academic Excellence Scholarship, HUST Awarded for outstanding academic performance (multiple semesters)	2022–2024