

Huy Gia Tong

BSc. in Information Technology @ VNUHCM-US

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Education

- **BSc. in Information Technology (Minor in Computer Vision)** 2021 - 2025
University of Science, Vietnam National University Ho Chi Minh City (HCMUS) GPA: 7.54/10 | Thesis: 10/10

Research Experience

- **Deep Learning Segmentation of Protostellar Outflows | *Internship*** September 2025 - November 2025
Institute of Astronomy and Astrophysics, Academia Sinica (ASIAA) | Supervisor: Dr. Hsien Shang Taipei, Taiwan (On-site)
 - Worked on the application of deep learning method to segment outflow structures of young sun-like stars.
 - Researched the vision transformer and Segmenter segmentation model.
 - Incorporated the masked image modeling pretraining stage to help improve downstream segmentation task.
 - Applied k-means clustering algorithm to assist in more detailed labeling of ground truth masks.
- **Machine Unlearning of Generative Adversarial Model | *Bachelor Thesis*** January 2025 - August 2025
HCMUS | Supervisor: Assoc. Prof. Thai Hoang Le HCMC, Vietnam (On-site)
 - Worked on the novel topic of machine unlearning (knowledge removal) for generative adversarial networks (GANs).
 - Researched and implemented a two-stage unlearning framework, leveraging the model's outputs and parameter space semantics to guide its optimization process.
 - Improved the performance by applying saliency-based selective neural modification.
- **Black Holes and Galaxies Research | *Research Assistant*** August 2022 - Current
Supervisor: Dr. Dieu Duc Nguyen (University of Michigan, USA) Remote
 - Assist in galaxy sample selection and astronomical data acquisition for future observations.
 - Provide computing support for simulation and data analysis procedures.
 - Collaborated with seniors in other explorations:
 - * Measuring spiral galaxy's pitch angle using computer vision software SpArcFiRe.
 - * Detecting strong gravitational lenses using convolutional neural network.

Industry Employment

- **Junior Software Engineer** December 2025 - Current
FPT Software (subsidiary of FPT Corporation) Can Tho City, Vietnam (On-site)

Publications

- [1] Dieu D. Nguyen, Michele Cappellari, Tinh Q. T. Le, Hai N. Ngo, Elena Gallo, Niranjan Thatte, Fan Zou, Tien H. T. Ho, Tuan N. Le, **Huy G. Tong**, and Miguel Pereira-Santaella. *Extending the frontier of spatially resolved supermassive black hole mass measurements to at $1 \lesssim z \lesssim 2$: simulations with ELT/MICADO high-resolution mass models and HARMONI integral-field stellar kinematics*. 2026, MNRAS, 546(4), stg238. (DOI: [10.1093/mnras/stg238](https://doi.org/10.1093/mnras/stg238))
- [2] Dieu D. Nguyen, Michele Cappellari, Hai N. Ngo, Tinh Q. T. Le, Tuan N. Le, Khue N. H. Ho, An K. Nguyen, Phong T. On, **Huy G. Tong**, Niranjan Thatte, and Miguel Pereira-Santaella. *Simulating Intermediate Black Hole Mass Measurements for a Sample of Galaxies with Nuclear Star Clusters Using ELT/HARMONI High Spatial Resolution Integral-field Stellar Kinematics*. 2025, Astronomical Journal, 170(2), 124. (DOI: [10.3847/1538-3881/ade9ba](https://doi.org/10.3847/1538-3881/ade9ba))

Extracurricular

- **9th Vietnam School of Astrophysics (Certificate)** July 2025
Student Participant Quy Nhon, Vietnam
- **University of Science Astronomy Club (USAC)** November 2021 - Current
Advisor & Mentor, Media Team Member HCMC, Vietnam
 - USAC is one of the leading astronomy club in Southern Vietnam.
 - Design promotional products (posters, videos) for public outreach events. On-site event photographer.
 - Mentor a group of students to study and present a survey of star formation research methods.