

Apivich Hemachandra (Kaotoo)

PhD Student in Computer Science

E-mail address: apivich at comp.nus.edu.sg, apivich.hem at gmail.com

LinkedIn: <https://www.linkedin.com/in/apivich-h>

Home Page: <https://apivich-h.github.io>

This CV was last updated on June 26, 2024. A more updated version may be found on <https://apivich-h.github.io/cv/cv.pdf>.

Education

2021 - Present, Graduate Studies (PhD), School of Computing

National University of Singapore, Singapore

- Under supervision of See-Kiong Ng and Bryan Low Kian Hsiang.
- Research area on deep active learning, physics-informed machine learning, and applications of kernel methods for neural networks.

2016 - 2020, B.Sc. in Physics

Mahidol University International College (MUIC), Thailand

- Cumulative GPA of 3.99 out of 4.00 (First-Class Honours).
 - Completed with minors in Computer Science and Mathematics.
 - Received Academic Achievement Awards in 2017, 2018 and 2019.
-

Publications

(Note: † denotes equal contribution.)

1. **PIED: Physics-Informed Experimental Design For Inverse Problems.**
[Apivich Hemachandra](#)[†], Gregory Kang Ruey Lau[†], See-Kiong Ng, Bryan Kian Hsiang Low.
ICML 2024 AI for Science Workshop.
 2. **PINNACLE: PINN Adaptive ColLocation and Experimental points selection.**
Gregory Kang Ruey Lau[†], [Apivich Hemachandra](#)[†], See-Kiong Ng, Bryan Kian Hsiang Low.
ICLR 2024 Spotlight Presentation. Acceptance rate: 5%.
 3. **Training-Free Neural Active Learning With Initialization-Robustness Guarantees.**
[Apivich Hemachandra](#), Zhongxiang Dai, Jasraj Singh, See-Kiong Ng, Bryan Kian Hsiang Low.
ICML 2023. Acceptance rate: 27.9%.
-

Work Experience

August 2020 - June 2021, Data Analyst, The Gang Technology Co. Ltd., Thailand

- Work on projects outsourced from PTTEP (a Thai petroleum extraction firm), that involves data analytics and decision making under economic, physical or geographical constraints.
- Also have other short-term projects with the company during my 3rd and 4th year of undergrad.

August 2019, Research Internship, Vidyasirimedhi Institute of Science and Technology, Thailand

- Worked on project focusing on active data selection for NLP context, which was eventually incorporated into my senior thesis.
-

Teaching Experience

Teaching Assistant at School of Computing, NUS

- CS3244 Machine Learning (S1, AY2023-24)
- CS3264 Foundations of Machine Learning (S2, AY2022-23; S2, AY2023-24)

Teaching Assistant at MUIC

- ICCS200 Data Structures and Algorithms (T3, AY2018-19; T1, AY2019-20)
 - ICPY132 Principles of Physics (T1, AY2017-18)
-

Awards and Competitions

August 2023, Recipient of SoC Research Achievement Award

- Awarded for research achievements in Semester 2 AY2022-23.

June 2023, Recipient of SoC Teaching Fellowship Scheme

- Awarded to five CS PhD students at SoC with excellent past performances as a tutor.

April 2018, Winner of FameLab Thailand

- A competition hosted by British Council Thailand where competitors gave a three-minute presentation about a scientific topic of their choice to a general audience.
 - Also was selected as the representative for Thailand at FameLab International 2018 at Cheltenham Science Fair, United Kingdom.
-

Skills

Mathematics Courses

Multivariate Calculus, Linear Algebra, Real Analysis, Discrete Maths, Statistics.

Computer Science Courses

Data Structures & Algorithms, Advanced/Contemporary Algorithms, Machine Learning, Numerical Methods, Introduction to Optimisation, Object-Oriented Concepts.

Programming

Experiences with writing projects in Python, Java, C++, and Julia.

Language

Thai (native speaker), English (fluent).

Standardised Scores

- TOEFL iBT: 114 out of 120 (taken in Jan 2020),
 - IELTS: 8.5 out of 9.0 (taken in Jan 2018),
-

Personal Interests

Video Making - RandomMathsInc

- URL: <https://www.youtube.com/c/RandomMathsInc>
 - A channel with around 12k subscribers (as of January 2024), which present topics in mathematics, physics and computer science often in entertaining ways.
-