# Apivich Hemachandra (Kaotoo)

## PhD Student in Computer Science

**E-mail address:** apivich dot hem at gmail dot com
**LinkedIn:** https://www.linkedin.com/in/apivich-h
**Home Page:** https://apivich-h.github.io

*This CV was last updated on November 19, 2023. 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. **PINNACLE: PINN Adaptive ColLocation and Experimental points selection**.
   Gregory Kang Ruey Lau[†], Apivich Hemachandra[†], See-Kiong Ng, Bryan Kian Hsiang Low.
   *NeurIPS 2023 Workshop on Adaptive Experimental Design and Active Learning in the Real World*.
2. **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 Techology 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 (Semester 1, AY2023-24)
- CS3264 Foundations of Machine Learning (Semester 2, AY2022-23)

**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 11k subscribers (as of October 2023), which present topics in mathematics, physics and computer science often in entertaining ways.

---