

TIAN XIAO

(+65) 8510 6059 ◊ xiao.tian@u.nus.edu
snoidetx.github.io

EDUCATION

Ph.D. in Computer Science

Jan 2025 – Dec 2028 (Expected)

National University of Singapore

Singapore

- Supervised by **Prof. Bryan Kian Hsiang Low** and **Dr. Nancy F. Chen**
- GPA: 5.00/5.00
- Funded by **A*STAR Graduate Scholarship (Computing) Scholarship**

Bachelor of Science & Bachelor of Computing

Aug 2020 – Dec 2024

National University of Singapore

Singapore

- Double honours degree in **Applied Mathematics** and **Computer Science**
- Specialisation in Artificial Intelligence, Algorithms, Theory and Computation
- **Turing Programme** candidate
- GPA: 4.95/5.00 (Applied Mathematics); 4.91/5.00 (Computer Science)
- Funded by **NUS Science & Technology Undergraduate Merit Scholarship**

Awards and Honours

- Recipient of National University of Singapore **Outstanding Undergraduate Researcher (OUR)** prize (**Best Undergraduate Researcher (Individual)**)
- **Top student** for *Machine Learning*, *Discrete Structures*, *Programming Methodology* and *Research Methodology* courses
- **Dean's List** awardee for 4 times
- Recipient of School of Computing **Take on the World (SToW)** award

RESEARCH INTERESTS AND PUBLICATIONS

Research Interests

- Data-centric machine learning (e.g., data valuation, data selection, machine unlearning)
- Multi-agent machine learning (e.g., collaborative/federated learning, incentive mechanism)
- Privacy-preserving machine learning (e.g., differentially private machine learning)

Publications

- [1] **Xiao Tian**, Rachael Hwee Ling Sim, Jue Fan, and Bryan Kian Hsiang Low. “[DeRDaVa: Deletion-Robust Data Valuation for Machine Learning](#)”. In: *Proceedings of the 38th AAAI Conference on Artificial Intelligence (AAAI-24)*, Vancouver, Canada, 20-27 Feb 2024. (Acceptance rate: 23.75%).
- [2] Rachael Hwee Ling Sim, Jue Fan, **Xiao Tian**, and Bryan Kian Hsiang Low. “[Deletion-Anticipative Data Selection with a Limited Budget](#)”. In: *Proceedings of the 41st International Conference on Machine Learning (ICML-24)*, Vienna, Austria, 21-27 Jul 2024. (Acceptance rate: 27.50%).
- [3] **Xiao Tian**, Jue Fan, Rachael Hwee Ling Sim, and Bryan Kian Hsiang Low. “[INO-SGD: Addressing Utility Imbalance under Individualized Differential Privacy](#)”. In: *The 14th International Conference on Learning Representations (ICLR-26)*, Rio de Janeiro, Brazil, 23-27 Apr 2026. (Acceptance rate: 28.18%).

RESEARCH AND PROFESSIONAL EXPERIENCES

Student Researcher

May 2023 – Sep 2023; May 2024 – Aug 2024

National University of Singapore

Singapore

- Conducted research on **collaborative machine learning** and **privacy-preserving machine learning** under the supervision of Prof. Bryan Kian Hsiang Low.

- Presented Publication [1] in the 38th AAAI Conference on Artificial Intelligence (**AAAI-24**).

Teaching Assistant

National University of Singapore

Aug 2021 – Present

Singapore

- Conducted weekly tutorial and laboratory sessions; developed course materials (e.g., slides, assignments, examinations); mentored group projects; reviewed and marked codes, assignments and examinations.
- Attained the **Honour List of Student Tutors** for 2 times (AY2021/22 and AY2022/23).
- Taught the following courses (with final teaching ratings obtained from students):

Course	Obtained Rating	Faculty Average Rating
<i>Data Structures and Algorithms</i>	4.6/5.0	4.2/5.0
<i>Machine Learning</i>	4.5/5.0	4.2/5.0
<i>Programming Methodology II</i>	4.8/5.0	4.2/5.0

Software Developer

Singapore Telecommunication Limited (Singtel)

May 2022 – Aug 2022

Singapore

- Acquired core skills in cross-platform mobile application development (including setting up dependencies and environment, building API connections and layers, implementing key logic, testing) with 20k+ lines of code.
- Developed **Wi-Fi Coverage Tool** and **Broadband Protect Service** features in **My Singtel App** from scratch as the core developer. Both features have been released in Version 9.3 of My Singtel App in both iOS and Android.
- Optimised performances and fixed bugs for *SIM Registration* and *Customer Inbox* features in My Singtel App.

Student Researcher

Agency for Science, Technology and Research (A*STAR)

Mar 2018 – Feb 2019

Singapore

- Conducted research on applying **machine learning** to **lock-in thermography** to detect the 3-dimensional geometry of partially visible objects and evaluated its practicability of being applied to real-life scenarios.

CO-CURRICULAR AND VOLUNTEER EXPERIENCES

Publicity Director

NUS Mathematics Society

Mar 2021 – Jun 2022

Singapore

- Managed all publicity matters of NUS Mathematics Society to increase its uptake and improve its impact in order to benefit the student community.
- Publicised NUS Mathematics Society in Orientation Camp and Student Life Fair via multiple social media platforms that recruited and retained around 120 members in total.

Academic Coach

NUS Teach Singapore

Aug 2021 – Dec 2021

Singapore

- Provided academic coaching and mentoring to children and teenagers under Christ Church Secondary School Champions Youth Tuition Programme, as a member of the NUS Teach Singapore initiative.

ADDITIONAL INFORMATION

Languages

English (Proficient), Mandarin (Native), Japanese (Basic)

IT Skillsets

Programming languages: Python, Java, MATLAB, JavaScript, Kotlin

Machine learning libraries: Scikit-learn, PyTorch, TensorFlow, Keras