

# Anvith Thudi

anvith.com

✉ anvith.thudi@mail.utoronto.ca

## Education

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### University of Toronto

*Ph.D. in Computer Science*

**Toronto, ON, Canada**

*Sep. 2022 - ongoing*

- Advisors: Nicolas Papernot and Chris Maddison

### University of Toronto

*B.Sc in Mathematics, Spent Fall 2020 in Engineering Science*

**Toronto, ON, Canada**

*Sep. 2020 - May 2022*

- GPA: 3.92/4.0

### Simon Fraser University

*Concurrent Studies Student (attended while in highschool)*

**Burnaby, BC, Canada**

*Sep. 2017 - May 2020*

- GPA: 4.09/4.33

## Awards and Honours

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### 2023 Canada Graduate Scholarship-Doctoral: NSERC

- *declined due to Vanier*

### 2023 Vanier Canada Graduate Scholarship: NSERC

- *Rank 1/173 of national round nominees (Ph.D. students in the Natural Sciences or Engineering)*

**Doctoral Entrance Scholarship:** UofT Department of Computer Science

**Doctoral Recruitment Award:** UofT Faculty of Arts and Science

**Galois Award:** University College UofT

**Dean's List Scholar:** UofT

**Dean's Honours List:** UofT

**2020 Loran Scholarship National Finalist:** Loran Scholar's Foundation

- *Top 88 highschool students in Canada*

## Publications

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### Journal Proceedings.....

**"From Differential Privacy to Bounds on Membership Inference: Less can be More":** Anvith Thudi, Ilia Shumailov, Franziska Boenisch, Nicolas Papernot. *Transactions on Machine Learning Research*

**"Selective Classification via Neural Training Dynamics":** Stephan Rabanser, Anvith Thudi, Kimia Hamidieh, Adam Dziedzic, Nicolas Papernot. *Transactions on Machine Learning Research*

### Conference Proceedings.....

**"Gradients Look Alike: Sensitivity is Often Overestimated in DP-SGD":** Anvith Thudi, Hengrui Jia, Casey Meehan, Ilia Shumailov, Nicolas Papernot. *Proceedings of the 33rd USENIX Security Symposium, 2024*

**"Better Sparsifiers for Directed Eulerian Graphs":** Sushant Sachdeva, Anvith Thudi, Yibin Zhao. *Proceedings of the 51st EATCS International Colloquium on Automata, Languages and Programming*

**"Training Private Models That Know What They Don't Know":** Stephan Rabanser, Anvith Thudi, Abhradeep Thakurta, Krishnamurthy Dvijotham, Nicolas Papernot. *Proceedings of the 37th Conference on Neural Information Processing Systems*

**"Proof-of-Learning is Currently More Broken Than You Think":** Congyu Fang, Hengrui Jia, **Anvith Thudi**, Mohammad Yaghini, Christopher A. Choquette-Choo, Natalie Dullerud, Varun Chandrasekaran, Nicolas Papernot. *Proceedings of the 8th IEEE European Symposium on Security and Privacy*, 2023

**"On the Necessity of Auditable Algorithmic Definitions for Machine Unlearning":** **Anvith Thudi**, Hengrui Jia, Ilia Shumailov, Nicolas Papernot. *Proceedings of the 31st USENIX Security Symposium*, 2022

**"Unrolling SGD: Understanding Factors Influencing Machine Unlearning":** **Anvith Thudi**, Gabriel Deza, Varun Chandrasekaran, Nicolas Papernot. *Proceedings of the 7th IEEE European Symposium on Security and Privacy*, 2022

**"Proof of Learning: Definitions and Practice":** Hengrui Jia, Mohammad Yaghini, Christopher A. Choquette-Choo, Natalie Dullerud, **Anvith Thudi**, Varun Chandrasekaran, Nicolas Papernot. *Proceedings of the 42nd IEEE Symposium on Security and Privacy*, 2021

## Preprints

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**"Finding Optimally Robust Data Mixtures via Concave Maximization":** **Anvith Thudi**, Chris J. Maddison

**"Unlearnable Algorithms for In-context Learning":** Andrei Muresanu, **Anvith Thudi**, Michael R. Zhang, Nicolas Papernot

**"SoK: Machine Learning Governance":** Varun Chandrasekaran, Hengrui Jia, **Anvith Thudi**, Adelin Travers, Mohammad Yaghini, Nicolas Papernot

## Experience

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Microsoft Research Cambridge  
Ph.D. Research Intern

Cambridge, UK  
May. 2023 - July 2023

## Talks

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**"Datapoints that are Easy to Unlearn":** Google DeepMind

**"Gradients Look Alike: Sensitivity is Often Overestimated in DP-SGD":** Usenix Security 24'

**"Datapoints that are Easy to Unlearn":** Harvard Efficient ML Seminar

**"The Unlearning Problem(s)":** CS 562 at University of Illinois Urbana-Champaign

**"The Unlearning Problem(s)":** The Alan Turing Institute

**"The Unlearning Problem(s)":** Cambridge

**"The Unlearning Problem(s)":** Google

**"The Unlearning Problem(s)":** EPFL

**"The Unlearning Problem(s)":** ETH Zurich

**"On the Necessity of Auditable Algorithmic Definitions for Machine Unlearning":** Usenix Security 22'

**"Unrolling SGD: Understanding Factors Influencing Machine Unlearning":** Euro S&P 22'

**"The Unlearning Problem(s)":** Meta

## Service

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**Reviewer:** Euro S&P (2022), ICLR (2025)

**Subreviewer:** IEEE S&P (2024), CCS (2023), Neurips (2022)

**Panel:** Neurips 2023 Unlearning Competition