# Zygimantas Straznickas

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## EDUCATION

**Massachusetts Institute of Technology**, Cambridge, MA

*Masters of Engineering in Computer Science - June 2020*

*Thesis: Towards a Verified First-Stage Bootloader In Coq*

**Massachusetts Institute of Technology**, Cambridge, MA

*Bachelor of Science in Computer Science - June 2017 - GPA 4.9/5.0*

## WORK EXPERIENCE

**Independent technical research** — **San Francisco, CA** — **Spring 2023 - Spring 2024**

- Participated in the Trojan Detection Challenge 2023, a NeurIPS competition, personally focusing on the Trojan Detection subtrack. Our team won 1st place, 2nd place and 5th places in 3 of 4 tracks. Focus: LLMs, optimization.
- Investigated and found counterexamples to Polynomial-Sized LP Models for Hard COPs, solving the posed computational challenge (result verified, announcement pending.) Focus: linear programming, polyhedral geometry.

**Multi LLC** — **San Francisco, CA** — **Spring 2022 - Spring 2023**

*Lead Engineer*

- Worked on the full LLM stack — training data collection and preprocessing, distributed pretraining, fine-tuning and inference.
- Implemented custom distributed training code to accommodate a nonstandard GPU network topology.

**Google Inc** — **Cambridge, MA** — **Summer 2020 - Spring 2022**

*Software Engineer, Bigtable*

- Worked on Bigtable, Google's internal non-relational database system.
- Designed and implemented systems to monitor silent data corruption in Bigtable, find corruption patterns and minimize the frequency of corruption incidents.
- Led several deep drill-down analyses into the system's concurrency logic, removing performance bottlenecks and fixing long-standing correctness bugs.

**Google Inc**

*Software Engineer, Hotels*

- Maintained and improved a statistical pipeline for measuring incoming data quality.

- Designed and implemented new tools for data verification, combining automatic scraper-based techniques and manual human-guided judgments.
- Designed and implemented a machine learning pipeline to predict the quality of incoming data, detect drops in accuracy and quickly react to them.

**Cambridge, MA**
**Summer 2017 -**
**Summer 2019**

**Yahoo! Inc**

*Software Engineering Intern*

- Worked on developing a distributed word embedding learning framework.
- Implemented a scalable word embedding evaluation system in Spark.