

# Matthew Habtezgi

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## Education

<b>Massachusetts Institute of Technology</b> <i>SB. Computer Science and Engineering, Mathematics</i>	4.5/5.0	Expected May 2025 Cambridge, MA
<ul style="list-style-type: none"><li>• <b>Relevant Coursework:</b> Design and Analysis of Algorithms (6.1220), Inference and Information (6.7800), Distributed Systems (6.5840), Advanced NLP (6.8611), Operating Systems Engineering (6.1810), Computer Architecture (6.1910)</li><li>• <b>Relevant Teaching Experience:</b> 6.101 (Fundamentals of Programming) Lab Assistant, 6.100A+B(Intro to CS and Programming w/ Python and Intro to Data Science w/ Python) Lab Assistant, 6.3900 (Introduction to Machine Learning) HKN Tutor</li></ul>		
<b>Massachusetts Institute of Technology</b> <i>MEng. Computer Science and Engineering</i>		Expected May 2026 Cambridge, MA

## Experience

<b>Structify</b> <i>ML Engineer</i>	Feb 2024 - Brooklyn, NY (Remote)
<ul style="list-style-type: none"><li>• Implemented data pipelines for collecting multimodal text-image data for finetuning on more general VLMs.</li><li>• Implemented SOTA ML algorithms such as knowledge distillation and PEFT on collected data for finetuning pretrained VLM models.</li></ul>	
<b>Amazon Web Services</b> <i>Software Engineer Intern</i>	June 2023 – Sept 2023, June 2024 - Sept 2024 Cupertino, CA
<ul style="list-style-type: none"><li>• Worked for AWS Hardware Engineering Services in the BIOS+UEFI Firmware Development team working on optimizing hardware interrupts from CPU-BMC communication over SSIF interface on Intel-based baremetal servers.</li><li>• Worked with Linux kernel to profile interrupts, firmware test automation, and AWS services. Used C, Python, x86 Assembly with embedded Linux, AWS CDK and SQL. Improved kernel level code and optimized hardware interrupt processing by a 15 percent margin.</li></ul>	
<b>MIT CSAIL - PL+V Lab</b> <i>Research Intern</i>	Sept 2023 - Cambridge, MA
<ul style="list-style-type: none"><li>• Working on research on the formal verification of hardware systems from cache based side-channel attacks / timing side-channel attacks on different processor/memory architectures. Using Coq for automated proof management and Koika for hardware engineering.</li></ul>	
<b>Cryptoclear</b> <i>Software Engineer</i>	Jan 2022 - Nov 2022 Cambridge, MA
<ul style="list-style-type: none"><li>• Developed gradient boosting models, hyperparameter tuning methods and bagging classifiers in model construction. Used Apache Spark and Parquet for data engineering and developing ETL pipelines to aid with inference and building training datasets</li></ul>	

## Projects

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