Michael Sun

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Education

Massachusetts Institute of Technology **Cambridge, Massachusetts**

Bachelor of Science - Computer Science and Engineering & Mathematics; GPA: 5.0 *May 2026*

Relevant Courses: Fundamentals of Programming, Discrete Mathematics, Multi-Variable Calculus, Linear Algebra

Activities: MIT Solar Electrical Vehicle Team, MIT Institute of Electrical and Electronics Engineers Freshman Representative, Talented Scholars, FLI@MIT, Interphase EDGE, Undergraduate Mathematics Association

Skills Summary

Proficient In: HTML/CSS, JS, Python, R, Arduino, Jupyter, Machine Learning, Version Control (Git), Swift

Interests: Statistics & Probability, Mathematical Modeling, Optimization and Testing, Computational Algorithms

Experience

MIT Computer Science Department **Cambridge, MA**

Lab/Teaching Assistant *January 2023 - Present*

- Hosted **10+** hours weekly of providing assistance to students with class material in 6.100A(Introduction to Computer Science Programming and Python) and 6.100B (Introduction to Computational Thinking and Data Science)
- Assisted **250+** students with their weekly problem sets in Python

MIT Lincoln Labs: Active Optical Systems Group **Cambridge, MA**

Student Researcher *September 2022 - Present*

- Implementing **sorting and path-finding algorithms** to optimize recorded geospatial data by 10%.
- Improving **machine learning algorithms** for image registration on existing lidar datasets by 5% in memory usage.

Jane Street **New York, NY**

Unboxed Intern *July - August 2022*

- Strengthened skills in **probability, game theory, analytical problem-solving, OCaml programming principles**
- Programmed API-scrapers and a **Discord Bot** that **utilized** the **New York Times API** to return the hottest news today upon command (Currently on 50+ servers).

Goldman Sachs **Remote**

FinTech Focus Interns *June 2022 - July 2022*

- **Designed and engineered** a full-stack web application (Keep) on small business development with **MongoDB, Python, HTML/CSS, Bootstrap, and Flask.**
- Presented to representatives of Bank of America, Wells Fargo, Goldman Sachs, J.P. Morgan Chase, and Morgan Stanley.

Workshops

Two Sigma New Seeker's Summit Attendee (Python, Quantitative Finance, Statistics): One of 60+ accepted globally to Two Sigma's annual New Seeker's Summit in January 2023 to learn more about Two Sigma's research methods and quantitative analysis.

Jane Street FOCUS Attendee (Software Engineering, Quantitative Finance, Business Development): One of 50+ accepted to learn more about Jane Street's trading, software engineering, and business development and **Strengthened** interview skills with logic, probability, and coding puzzles produced by Jane Street

Projects

deQrypt (Python, Qiskit, Machine Learning): Trained a quantum support-vector-machine with data obtained from feature-engineering financial data from yfinance and performed sentimental analysis on NewsAPI data. **60%** overall accuracy.

Spotify Recommender (Python, Machine Learning): Trained a feature-based neural network to provide song recommendations based on user's Spotify playlists; 7/10 out of 90+ reviews.

MIT-NASA Momentum Project (Python, Data Science, Physics/Mathematical Modeling): Programmed a spacecraft simulator approaching Neptune's orbit with **differential** functions and **AR/VR & Matplotlib** development

OceanHackWeek Hackathon (Data-Visualization & Modeling): Contributed to **open-source** project (200+ lines) of **analyzing** Alaskan earthquake databases and **devising** a GIF generator of seismic waves using **time-series** data.

Portfolio Website (Bootstrap, Flask, HTML/CSS): Personal portfolio page to keep my relevant projects and experiences as an online documentation; link: **xmike-yyy.github.io/xmike_yyy/**(currently rebuilding with React)

World Cup Predictor (Python, Pandas, Probability): Created predictor with **Poisson Distribution** and **sci-kit learn** that has predicted up to **65% accuracy** in all matches for 2022 Qatar World Cup.

Sudoku Solver (Python): Programmed a Sudoku Solver with **backtracking algorithms** to solve within **0.1 seconds**

Honors and Awards

MIT Undergraduate Mathematics Puzzle: Winner of the November competition.

Gates Scholar - Cohort V: One of the **300 students** selected among the **37,000+ applicants** to receive a **full-ride scholarship** from **the Bill and Melinda Gates Foundation.**

Questbridge National College Match Scholar: One of the ten Questbridge students (**nationally recognized first-generation-low-income**) chosen from **16500+** that's offered a **full-ride scholarship** to **MIT**.

Asian Pacific Islander Association Scholar (APIA): One of **450** scholars chosen from **22,500+** applications (2%). Chosen to be sponsored by **Cox Enterprises** to receive a **$10,000** scholarship to cover my education costs.