David Zhang

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EDUCATION

Massachusetts Institute of Technology (MIT) | GPA: 5.0 — Cambridge, MA
B.S. Physics, and Computer Science — [June 2027]
Key Coursework: Inference and Information (G), Machine Learning (G), Multi-agent Learning (G), Design and Analysis of Algorithms, Data Structures and Algorithms, Computation Structures, Quantum Mechanics II

TECHNICAL SKILLS

Programming – Python, C++, Kotlin

Frameworks – Pytorch, NumPy, Pandas, Matplotlib

Tools – Android Studio, Jetpack Compose, Adobe Lightroom

HONORS

International Olympiad on Astronomy and Astrophysics Gold Medalist (2022)
MIT Pokerbots 5th Place (2025)
Science Olympiad 2x National Team Champion (2021, 2022)
M3C Mathworks Technical Computing Finalist (2023)
MIT Pokerclub Tournament Placings: 2/80 (Fall 2023), 3/100 (Spring 2024)

EXPERIENCE

International Olympiad on Astronomy and Astrophysics Gold Medalist **[Aug 2022, Aug 2023]**

- Represented team USA at the International Olympiad for 2022 and 2023, awarded Gold and Silver respectively.
- Placed 2nd on the National Astronomy Competition, the national level qualifying exam.

UROP at MIT CSAIL – Pulkit Agrawal's Lab **[Sep 2025 -]**

- Beginning research in algorithmic design of RL and Imitation Learning.

Amazon | Software Development Intern **[Jun 2025 - Aug 2025]**

- Created a standalone Kotlin package for a new feature in the Android Kindle app, along with an integration pipeline
- Built UI in Jetpack Compose with unit tests in Robolectric. Package is split into Model-View-ViewModel architecture and a standalone testing app.
- Modified existing codebase to adopt the package, connected to internal data services via company SDKs

MIT Pokerbots 2025 Competition **[Jan 2025]**

- Placed 5th out of 89 teams in the annual Pokerbots competition for the Bounty variant.
- Researched, implemented, and tested machine learning techniques, including K-means clustering, game and action state abstractions, and Monte Carlo Counterfactual Regret Minimization (MCCFR).
- Designed, developed, and playtested the bot against other teams. Written in C++ from scratch.

UROP at MIT Plasma Science Fusion Center **[Sep 2024 – May 2025]**

- Modified existing active learning pipeline to predict properties of the pedestal within a Tokomak fusion reactor. Bayesian networks were trained on the EPED simulation.
- Gained a background in plasma physics and ML packages, extended an active learning pipeline, generated datasets, and tested the model.

OTHER

Mason Science Olympiad Club Captain — [May 2022 - May 2023]
Royal Conservatory of Music, Lv10 Piano Performance and Music Theory — [May 2024]