Ryan Chin

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EDUCATION

Massachusetts Institute of Technology Expected Grad: May 2028

Bachelor of Science in Computer Science and Finance

- **Selected Coursework**: Design and Analysis of Algorithms, Intro to Machine Learning, Web Development, Intro to Deep Learning, Programming in C and Assembly, Linear Algebra, Probability Theory (Grad), Startups Seminar

EXPERIENCE

Undergraduate Researcher - MIT CSAIL Clinical Decision Making Group (2024 - present)

- Deployed multiagent LLM fraud name detection system for Itaú, cutting false negatives by 60% and scaling to millions of transactions for production
- Enhanced fraud detection using XGBoost with SMOTE and integrated user profiling for improved model precision on large-scale financial transactions

Research Intern - UT Austin CLeAR Lab (2023 - 2024)

- Developed a trajectory solver reducing errors in collision-avoidance systems, leveraging log-barrier constraints & user-generated input trajectories
- Coded display of collision-free trajectories for non-cooperative multi-agent systems, incorporating inferred rotating hyperplane inequality constraints

Software Subteam Lead (FIRST Robotics) - Valor 6800 (2021 - 2023)

- Led development of autonomous robot control, awarded “Excellence in Autonomy” at state championships for consistent and precise trajectory generation
- Engineered a vision-based auto-tracker, boosting cargo scoring by 200%
- Designed command-based automation for robot climbing, reducing climb time by 60%

PROJECTS

Chain Reaction | 5th Place Winner in MIT WebLab 2025 Competition (out of 80 teams)

- Sole backend developer, architected a scalable real-time multiplayer game using Express.js, MongoDB, and WebSockets, handling concurrent players with low-latency game state updates, real-time scoreboard, and global leaderboards
- Implemented dynamic host transfer, AI-driven theme customization, guest authentication, and role-based access control, improving session persistence and security

LEADERSHIP AND ACTIVITIES

Developer - HackMIT DevOps (2025 - present)

Grader for 6.1210 (Intro to Algorithms) - MIT EECS (2025 - present)

Team Captain - Texas Momentum (2021 - 2024)

- Led team of 15 students to 4th Place Team Sweepstakes at ARML 2024—highest in team history
- One of 16 students statewide selected for HMMT and PuMAC competitions

Founder, (Former) President - Vandegrift Math Club (2022-2024)

- Founded and organized an annual math tournament for local students, overseeing outreach efforts and securing sponsorship for awards
- Directed and co-taught a six-week online summer camp for elementary students, and initiated weekly math workshops for local middle school students

HONORS AND AWARDS

- USA Math Olympiad (USAMO) HM Awardee (Top 3 in Texas, Top 100 in Nation); 6x AIME Qualifier; ARML Tiebreaks
- USA Computing Olympiad Gold Division
- FIRST Robotics State Champion (of 180 teams) & State Record High Score; DECA ICDC Finalist (6th Place)

TECHNICAL SKILLS

Programming Languages: C++, Java, Python, MATLAB, JavaScript, HTML/CSS, Julia, SQL, Typescript

Frameworks & Libraries: React, Node.js, Express.js, MongoDB, Makie.jl

Networking & APIs: REST APIs, Socket.io, WebSockets

Tools & Technologies: Git/GitHub, Linux/Unix, VS Code, LaTeX