Alexander Mcneilly

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Education

Massachusetts Institute of Technology (MIT) Cambridge, MA
B.S. in Computer Science and Engineering *Sep 2022 – Dec 2025*
Courses: Algorithm Analysis, Software Construction, Computer Architecture, Low-level Programming, Linear Algebra
Activities: MIT Informatics Tournament, SHPE, CodeForces, Project Euler, Citadel East Coast Datathon

Skills

Languages: C++, C, Python, C#, Swift, TypeScript, SQL, Go
Tools: Git, Linux, Node, Express, React, MongoDB, MySQL, TCP/IP, REST APIs

Experience

Aura Intelligence — Software Engineer Intern *Feb 2024 – May 2024*
- Incoming spring software engineering intern for adaptive LLM startup, working with TS, React, Python, Three.js

MIT Media Lab — Software Engineer Intern *Feb 2024 – Present*
- Develop AI-powered interaction features for augmented reality smart glasses platform

MIT Informatics Tournament — Organizer (Software, Infrastructure, Branding) *Sep 2023 – Present*
- Designed website and branding to support 1,250+ contestants and secure $15,000+ in sponsorships
- Created sponsorship materials and garnered support from top firms like Citadel, Jane Street, and Hudson River Trading

Jane Street — Software Engineering IN FOCUS Participant *Jan 2024*
- Developed high frequency ETF trading bot in Python for electronic trading competition
- Applied functional programming knowledge in OCaml to build multiplayer snake game

MIT EECS — Teaching Lab Assistant (Intro to Programming and Data Science) *Sep 2023 – Dec 2023*
- Enhanced 100+ students' programming skills with 50+ hours of personalized debugging assistance and code reviews
- Developed solutions and implemented test cases for two problem sets in a class of 300+ students

MIT Pokerbots — Software Engineer *Jan 2023 – Feb 2023*
- Co-developed poker bot in Python (redesigned and optimized in C++) for MIT's 2023 pokerbot competition
- Recognized by DRW Holdings for best risk to reward algorithm; Placed top 20 out of 200 Teams

Hack Ridge — Software Engineer, President (2022) *Nov 2019 – Aug 2022*
- Organized two 24-hour annual hackathons to host over 400 students, securing over $6,000 in sponsorship
- Engineered a color blob detection Android app in Java/OpenCV; Launched mental health social studying app using Java

Projects

Splocks: Code 3D Easily On The Web [Ongoing] | *TypeScript, Node, React, ThreeJS, GraphQL, AWS*
- Designing block functions and hierarchy for browser-based 3D block coding language; Launching in mid February

Memva: Canva Clone For Making Memes [Ongoing] | *TypeScript, Node, Express, React, MongoDB, HTML, CSS*
- Crafting Canva-like meme designer to learn how to build browser-based design tools

PixelLab: TypeScript-Based WebGL Engine [Ongoing] | *TypeScript, React, WebGL, C#*
- Building web game engine with WebGL to explore web-based engine construction

NoteLab: Collaborative Post-It Whiteboards | *TypeScript, React, SQL, ConvexDB, Clerk*
- Developed Miro-style collaborative web app to learn multiplayer networking and synchronous data mutation

Sushi Go! In Go | *Go, C++, Python*
- Crafted Go (and later C++ and Python)-based engine for *Sushi Go!*, optimizing gameplay mechanics and flow
- Organized dynamic card interaction methods, elevating overall game strategy complexity

SpriteChest: 2D Game Engine | *C, C++, OpenGL, SDL*
- Develop C-based 2D game engine using OpenGL, SDL to learn engine creation

LISP Functional Programming Interpreter | *Python, LISP, Scheme*
- Engineered Python interpreter for Scheme, enabling efficient code tokenization and parsing
- Architected frame-based function mapping, significantly boosting Scheme code execution efficiency