Sean L. Snaider

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EDUCATION

Northeastern University   **Boston, Massachusetts**
B.S. in Computer Science, Concentration in Software   *Expected Graduation, May 2028*
- o   **GPA:** 3.93/4.00, *Dean's List*
- o   **Related Coursework:** Computer Systems, Algorithms and Data Structures, Object-Oriented Design, Databases

SKILLS

Languages: Python, Java, C, x86-64 Assembly, SQL, JavaScript, TypeScript
Frameworks & Libraries: React, Next.js, Tailwind, Zustand, Web Audio API, Pandas, NumPy, Matplotlib, Pygame, Java Swing
Tools & Platforms: Git, Linux/WSL, Docker, GDB, Vite, JUnit, Unittest, VS Code, IntelliJ IDEA, Vercel

EXPERIENCE

Khoury College of Computer Sciences, Northeastern University   **Boston, Massachusetts**
TA for Program Design and Implementation 1 (Fall '25) & 2 (Spring '26)   *Sep 2025 - Present*
- Selected AI coding platform adopted by 400+ students after evaluating 6 tools; designed AI literacy lab curriculum teaching prompt engineering and AI-assisted debugging workflows
- Resolve 30+ weekly debugging sessions across Python/Java, mentoring students on systematic diagnosis of OOP hierarchies, data structures, and control flow issues

Disrupt, Northeastern University   **Boston, Massachusetts**
Software Engineer   *Sep 2025 - Present*
- Build responsive web interfaces using Next.js, React, and Tailwind CSS in production codebase
- Ship features through Git workflows (branching, PRs, code reviews) in collaboration with 5+ developers
- Design and deliver SQL/Python workshops (10-50 attendees) covering query optimization, joins, and scripting automation

theCubicle   **Elmsford, New York**
Software Developer, Senior Experience Program   *Jan 2024 - May 2024*
- Pitched and secured sponsorship directly with company leadership; completed 100+ hour mentored development program with iterative code reviews
- Designed and built a Rubik's Cube teaching tool using MVC architecture with state validation to guide users through Beginners method solving stages

PROJECTS

Guitar Learning Tool *- React, TypeScript, Zustand, Web Audio API, Tailwind*   *Nov 2025 - Present*
Independent Project
- Achieved <10ms audio latency through Web Audio API optimization with ADSR envelope shaping, enabling responsive feedback across 144 fretboard positions
- Built scale library with 40+ patterns (modes, pentatonics, jazz) using CAGED and 3-notes-per-string systems, persisting progress via Zustand and localStorage
- Implemented three practice modes (note ID, sequence drills, interval training) with adaptive difficulty from open position to full neck

Rubik's Cube Solver and Teaching Tool - *Python, React, TypeScript, FastAPI, MongoDB*   *Jan 2024 - Present*
Independent Project
- Integrated C library implementing Kociemba's algorithm, reverse-engineering undocumented cube orientation requirements to achieve < 20-move solutions in <1 second
- Rebuilding as full-stack web application with React/TypeScript frontend using CSS 3D transforms, FastAPI backend, and MongoDB for persistent solve statistics

Sanguine - *Java, JUnit, Java Swing*   *Nov 2025 - Dec 2025*
Team Project
- Architected pub-sub event system enabling real-time two-player state synchronization with zero perceptible UI latency
- Designed pluggable AI strategy system using interfaces for runtime difficulty selection, demonstrating Strategy pattern and polymorphism
- Achieved 90%+ code coverage using JUnit mocks, catching edge cases across controller, strategy, and model layers