Colin McNally

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EDUCATION

Worcester Polytechnic Institute (WPI)   *Worcester, Massachusetts*
B.S. Computer Science   *Aug 2023 - Present*

RELEVANT COMPLETED COURSEWORK

Introduction to Program Design, Object-Oriented Design Concepts, Systems Programming Concepts, Introduction To Machine Organization and Assembly Language, Discrete Mathematics, Algorithms, Database Systems I, Foundations Of Computer Science

SKILLS & INTERESTS

Programming Languages: Java, Dart, JavaScript, TypeScript, SQL, C, C#, C++, Racket, R, Python
Frameworks: ReactJS, NextJS, Flutter, React Native
Applications: Github, Git, VSCode, IntelliJ, Android Studio, Firebase, Oracle, Node.js, Figma, SQL Developer, LaTeX, SCADA, Drizzle ORM, Clerk, Stripe, Microsoft Office
Interests: AI & LLMs, Animation, Chess, E-Sports, Golf, Soccer, Weight-Lifting

PROJECT EXPERIENCE

VisMath | ReactJS, JavaScript, TypeScript, Python   *April 2025 - Present*
- Developed an interactive math visualization app that dynamically renders equations as animated graphs for educational purposes.
- Created responsive UI using ReactJS and Math.js for equation parsing; implemented visualization system with Recharts library. Implemented a GPT-based agent to generate tailored mathematical insights in response to user interactions.
- Built a Python backend API to handle complex calculations; designed modular component architecture for maintainability.

Image & Matrix Transformations | Python   *Nov 2024 - Dec 2024*
- Developed a program to scale, rotate, and reflect images using Python and linear algebra.
- Implemented matrix transformation functions to manipulate pixel arrays, deepening understanding of coordinate geometry in image processing, and problem solving.

Depress-Minus App | Flutter, Dart, NoSQL   *Jan 2022 – June 2023*
- Developed a mental health app with features like journaling, mood tracking, and stress relief techniques.
- Created UI in Flutter and Dart; built the database model in NoSQL and Firebase; tested using Android Studio.
- Integrated user authentication, data persistence, and mood trend analysis features to improve user experience and retention.

WORK EXPERIENCE

Singularity Softworks   Remote, Toronto CA
Full-Stack Software Developer Intern   *Jun 2025 - Present*
- Contributed to full-stack development of AI-driven products using TypeScript, Next.js, MCP, and LLMs.
- Improved performance and reliability of existing features; practiced Agile development and code reviews.
- Integrated Clerk (auth), Stripe (payments), Drizzle ORM (DB), and external APIs for scalable services.

Aquarion Water Company   Shelton, Connecticut
Supply Operations Intern   *Jun 2025 - Present*
- Collected water samples and performed lab tests (e.g., turbidity, pH, UV254) to ensure regulatory compliance.
- Used SCADA software to analyze water levels, system pressures, and chemical feeds for operational insights.
- Supported maintenance tasks and collaborated with operators to ensure safe and reliable water supply.

Code Ninjas   Trumbull, Connecticut
STEM Instructor   *Dec 2021 - May 2024*
- Taught programming concepts in Python, JavaScript, C++, C, and block-based tools to students.
- Guided students through debugging and project-based problem-solving exercises.
- Customized teaching strategies for various learning styles while maintaining safety standards.