Alex Mcneilly

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Education

Massachusetts Institute of Technology (MIT) – *GPA: N/A* Cambridge, MA

Candidate for Bachelor of Science in Computer Science *Class of 2026*

- **Past Coursework:** Intro to Computer Science in Python, Intro to C and Assembly
- **Spring Courses:** Discrete Math for CS, Fundamentals of Programming (Python), Linear Algebra **SAT:** 1590
- **Activities:** Sigma Nu Fraternity, SHPE, 2023 MIT Pokerbots Competition, UI/UX @ MIT

Experience

Hack Ridge/Maine South High School CS Club Sep 2020 – Jul 2022

President (2022), Event Overseer (2022), Head of Marketing (2021), Hacker *Park Ridge, IL*

- Oversaw organization and promotion of two 24-hour annual hackathons in the Chicagoland area, impacting over 400 students through workshops, tech talks, and coding contests, securing $6,000+ in grants, prizes, and sponsorship
- Developed a color blob detection mobile app built in Java, C++, and OpenCV for the 2020 competition
- Developed and presented a social mental health studying app built in Java and Android Studio for the 2021 competition

MIT MathRoots Summer Program Jun 2021 – Jul 2021

Student and Competition Participant *Virtual*

- Participated in a two-week mathematical talent accelerator for nationally selected high school students from underrepresented backgrounds or underserved communities
- Acquired advanced knowledge in discrete math concepts, proofs, probability, combinatorics, and LaTeX
- Collaborated with peers to solve complex mathematical problem sets and participated in olympiad-style competitions

VR/AR Association, Student Committee Jul 2020 – Nov 2020

Co-Director of VR/AR Student Resource and the Curiosity Project *Virtual*

- Directed the weekly production, editing and publishing of the VR/AR Parent and Student Resource, an open online resource designed to introduce students to the metaverse and VR/AR technology development process
- Edited contributions by students from Harvard, McMaster University, and the Massachusetts Science and Engineering Fair
- Presented VR/AR Parent and Student Resource at VR/AR Global Summit 2020 (now Immerse Global Summit)

Projects

Hygge: A Projection-Based AR Painting App | *Processing, P5.js, HTML, CSS* Sep 2022

- Co-created a projection-based augmented reality interactive painting and dancing app, for the Samsung Project the Future of Wellbeing Hackathon at the MIT Media Lab
- Utilized p5.js (Processing) and PoseNet pose detection to track and map motion of user's movements and paint strokes; projected art on surfaces using Samsung Freestyle projector

GeoTrigAR: AR Geometry Visualization Tool (https://tinyurl.com/geotrigar-paper) | *C#, XML* Mar 2022

- Researched and created an augmented reality geometry visualization demo app in C# and XML using ARCore and Unity Engine's ARFoundation for the Illinois Junior Academy of Science (IJAS) Science Fair 2022

Swatches AR (https://tinyurl.com/puzzil-swatches) | *C#, XML, Java* Dec 2020

- Developed an augmented reality graffiti demo in C# and XML using ARCore and Unity Engine's ARFoundation for a Computer Science Independent Study class

Educational Augmented Reality Blog Website (http://puzzilar.com) | *HTML/CSS/JS, PHP, SQL (MySQL)* Aug 2020

- Developed and designed an educational website with a custom blog client and archive to write and host articles on augmented reality and immersive technology
- Utilized custom MySQL database to store and retrieve blog post data (PHP API)

Skills

Languages: *Advanced* – C/C++, Python, PHP, JavaScript, HTML/CSS; *Prior Experience* – C#, LaTeX, SQL
Frameworks: *Prior Experience* – React, Node.js, Flutter, ARFoundation, ARCore, Spark AR
Developer Tools: *Advanced* – Git, VS Code, Android Studio, Figma, Visual Studio, IntelliJ, Unity