

Matthew McCall

linkedin.com/in/96d9

About Me

I am a third-year dual major in computer science and computer systems engineering. I am a dedicated team player who led multiple teams through developing software. I have a strong passion for developing software on embedded devices.

Skills: C++, React, TypeScript, MATLAB, VHDL, KiCad, SolidWorks, FreeCAD, LaTeX, MS Word, Excel, PowerPoint

Education

| | |
|--|--|
| Rensselaer Polytechnic Institute Bachelors in Computer Science and Computer Systems Engineering, Class of 2026 | <i>August 2022 – (Expected) May 2026</i> |
|--|--|

| | |
|--|-----------------------------------|
| Benjamin N. Cardozo High School High School Diploma with Regents Advanced Designation with Mastery in Mathematics, Class of 2022 Member of the National Honors Society (ARISTA) | <i>September 2018 – June 2022</i> |
|--|-----------------------------------|

Work Experience

| | |
|--|---------------------------------------|
| Engineering and Quality Intern at HarcoSemco Conducted extensive electrical testing of aerospace sensors. Subsequently, I found potential bottlenecks and submitted written proposals for improvement. | <i>September 2024 – December 2024</i> |
|--|---------------------------------------|

Wrote Arduino code for detecting potential toxic gasses using Bosch sensors and sending data over Bluetooth. I also developed the corresponding React dashboard that uses Web Bluetooth for displaying data in real time.

Automated dimensional inspections of manufactured parts, reducing time to inspect parts.

| | |
|---|---|
| Undergraduate Research Assistant at SCOREC Reduced runtime by 30% by implementing a GPU-bound memory pool in Omega_h, a C++ library for triangle mesh adaptivity. | <i>September 2022 – August 2024, January 2025 - Present</i> |
|---|---|

Authored a scientific paper and poster in LaTeX. I presented my work at two poster sessions at RPI.

| | |
|--|---|
| Mercer XLab Assistant Guided students through safety best practices, circuit design, soldering, equipment usage. | <i>May 2024 - August 2024, January 2025 – Present</i> |
|--|---|

Project Experience

| | |
|--|---------------------------------|
| Open Algebra Software for Inferring Solutions (OASIS) – C++, C Currently leading the team for the OASIS project, an open-source C++ library for computer algebra and symbolic manipulation. I used GitHub Issues, Projects, and Pull Requests to manage the project. | <i>September 2023 – Present</i> |
|--|---------------------------------|

| | |
|---|-------------------------------|
| Eye Robot – C#, Arduino C++ Eye Robot is a robot that assists the visually impaired in navigation. I worked in a team to write C# software that leverages ARKit on iOS to construct a 3D model of the room using LiDAR and send commands to an onboard ESP32. | <i>May 2024 – August 2024</i> |
|---|-------------------------------|

Volunteer Experience

| | |
|---|---|
| Rensselaer Center for Open Source (RCOS) Mentor Served as an RCOS mentor; Mentors provide guidance and technical support for multiple projects. | <i>May 2024 - August 2024, January 2025 – Present</i> |
|---|---|

| | |
|--|---|
| Volunteer at The Forge, An RPI Student Makerspace Assisted students with computer aided design and 3D printing | <i>May 2024 - August 2024, January 2025 – Present</i> |
|--|---|

| | |
|--|----------------------------|
| Live Stream Assistant at St Mary Church, Branford CT Routinely aids with executing livestreams of Sunday Mass. | <i>June 2022 – Present</i> |
|--|----------------------------|
