



# David Macpherson

Ashburn, VA @ [david.allan.macpherson@gmail.com](mailto:david.allan.macpherson@gmail.com) <https://ironon.me>

## Summary

I am computer science, hardware engineering, and robotics student at the Academies of Loudoun. I have 8+ years of experience in programming, and 4 years experience in AI & ML applications. Using my skills to make real change in the world is my goal.

## Profiles

- [ironon](#)
- [Portfolio](#)

## Experience

### 5338 FRC Robotics Team November 2023 - Present

Developer  
<https://github.com/roboloco-5338>

I'm a software developer for the 5338 Robotics Team, one of the top teams in the Chesapeake area.

### Offical School Website Creator August 2021 - Present

Owner  
<http://tuskytime.org>

I am the official creator & maintainer of a website for my school that is used by thousands of students every week to help with scheduling issues.

### Technology Student Association November 2024 - Present

Member  
<https://tsaweb.org/>

I am a member of the Technology Student Association, and I've been building an autonomous rover to compete in a state-wide competition.

## Projects

### AutoNote October 2023

<https://ironon.me/project/?id=1>  
Uses AI and LLM technologies to turn a teacher's notes slideshow into studyable, actionable flashcards. Greatly improves studying efficiency.

### Automatic Key Maker December 2024

<https://ironon.me/project/?id=7>  
LLM system that can accurately solve college-level problems from nearly every field of science and mathematics by leveraging new advances in agentic AI, and by using LLM's code generation abilities.

### Weekend 3D Printed Robot November 2023

<https://ironon.me/project/?id=9>  
In order to guarantee my admission into my school's local robotics team, I prototyped, designed, 3d-printed, wired, and programmed a fully functional miniature robot in the span of 2 days.

## Education

Academies of Loudoun  
4.51 GPA  
November 2023 - Present

AET Engineering  
<https://www.lcps.org/o/acl>

I am a student at a highly-selective specialized STEM magnet school

## Awards

AcademiesHacks Hardware Winner  
Academies of Loudoun  
March 2024

[Devpost](#)

National Merit Scholarship Letter of Commendation  
CollegeBoard  
November 2024

## Skills

- Data Science w/ Python
  - ● ● ● ●
- Machine Learning / LLM Engineering
  - ● ● ● ●
- Backend Development
  - ● ● ● ●
- Frontend Development
  - ● ● ● ●
- Robotics w/ WPILib
  - ● ● ● ●
- Computational Statistics with R
  - ● ● ● ○
- AWS Cloud Engineer
  - ● ● ● ○
- Embedded Systems Development
  - ● ● ● ○
- Languages
  - Python
    - ● ● ● ●
  - C++
    - ● ● ● ○
  - Rust
    - ● ● ● ○
  - MATLAB
    - ● ● ● ○
  - R
    - ● ● ● ○