Andrew Mitchell

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Education

University of Notre Dame, Notre Dame, IN 2021-2025

- Bachelor's of Science, Majoring in Computer Engineering
- Cumulative GPA: 3.9, Dean's List - 3 semesters

Technical Skills

Languages/Technologies - Python, C, JavaScript/TypeScript, React, Next.js, HTML/CSS, Git, Unity/C#,Verilog,Bash
Courses - Data Structures, Systems Programming, Compilers & Language Design, Digital Integrated Circuits, Intro to AI, Computer Architecture, Logic Design, Theory of Computing, Programming Challenges, Fundamentals of Computing, Engineering Programming, Discrete Mathematics, Linear Algebra & Differential Equations

Experience

Engineering & Science Computing at Notre Dame - Computer Consultant August 2022 - Present

- Process, set-up and deliver new university computers to staff.
- Assist faculty with troubleshooting IT problems.

NASA Jet Propulsion Laboratory - Software Engineering Intern June 2023 - August 2023

- Worked with a partner to improve the DSN Telemetry Accountability Project under the Deep Space Network Emulator team, which tracks telemetry data as it travels from spacecraft to JPL by generating accountability records at specific venues along the path.
- Used C to implement new capabilities which allow the project to handle multiple different types of telemetry data simultaneously and process each stream correctly.

Fountain Bowl - Customer Service Associate July 2022 - August 2022

- Solved customer problems and provided a clean and healthy environment at a local bowling alley.

Self-Employed - Personal Tutor March 2018 - May 2021

- Created and implemented lesson plans in various subjects for middle and high school students, teaching challenging topics in one-on-one tutoring sessions.

Projects

AMTimer - *Next.js, TypeScript, Firebase, HTML, CSS*

- Prototype Rubik's Cube timer capable of generating random scrambles, manipulating a cube model to display the scrambled state, and keeping track of each user's statistics over time.
- Uses Firebase backend for authentication and statistics database.

Project Horizon - *Python (Flask), HTML, CSS*

- A web-app prototype created with a team during a Hackathon that aims to encourage homeowners to switch to renewable energy by providing a free estimate on the benefits of solar power in their area.

Capture the Flag - *Unity, C#*

- A remake of an original 2D Scratch game I created in fifth grade that involved scripting, UI, and graphic design. Developed into both a PC game and a mobile app.

Self-Driving Car - *JavaScript, HTML, CSS*

- Introductory machine learning project that uses neural networks and genetic mutation to create a car that drives and avoids obstacles on its own.

Other Interests

Drones - Taught myself basic electronic systems and soldering to build my own First Person View quadcopter from parts, learned how to fly and perform tricks with it, crashed and repaired it many times.
Choir - Performed with and held leadership positions in prestigious choral groups from middle school to college.
Cubing - Competitive Rubik's cube solver, achieving a 3x3 average of ~12 seconds and peak ranking in the top 300 in the country in one event, current member of the ND Rubik's Cube Club.