

William J. Hoppe

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EDUCATION

University of Notre Dame

GPA: 3.86/4.00 | Dean's List

Major: Computer Science | Concentration: Machine Learning/Artificial Intelligence

Notre Dame, IN

Class of 2025

PROFESSIONAL EXPERIENCE

Artificial Intelligence Research

Research Assistant

Notre Dame, IN

August 2023 - Present

- Worked one-on-one with a professor of tech & economics, researching strategic modifications to a large language model, with the aim of tailoring it to educate underprivileged students in acquiring programming skills.
- Leveraged Anyscale infrastructure to fine-tune Meta's Llama 2 large language model with user study data.

Human Computer Interaction Research

Research Assistant

Notre Dame, IN

December 2022 - Present

- Collaborated on two projects, contributing to multimillion dollar grant-funded research relating to HCI and UX.
- Enhanced design of a React Native mobile application focused on food accessibility within Figma workspace.
- Led a user study for a Node.js application designed to enhance the graduate student admission verdict-making process through organizing and quantifying the analysis of application materials and relevant decision factors.

Cadets Cut

Web Developer & SEO Analyst

Farmington, MN

May 2022 - June 2023

- Designed and managed company website for a home services provider with 500+ clients using WordPress.
- Expanded customer base by 150+ clients through digital exposure, driving significant revenue growth.
- Integrated custom contact form with Firebase to store and send formatted JSON data to company via email.
- Optimized for search engine page visibility and pushed site to becoming first result using Yoast SEO plugins.

RELEVANT PROJECTS

TuneWave

Full Stack Developer

Mendota Heights, MN

May 2023

- Developed web app using Node.js and JavaScript that fetches API key via serverless function deployed by Netlify.
- Utilized recurrent calls to OpenAI API to generate personalized song titles, lyrics, and album art from prompt.
- Leveraged Vite frontend build tool to efficiently manage multiple modules, expediting the development workflow.

COVID-19's Impact on US Economy Project

Project Leader

Notre Dame, IN

April 2022

- Parsed CSV data from economic institutions to construct Pandas DataFrames of quarterly trends for 15 sectors.
- Converted data into interactive Plotly graphs using Python to visualize COVID-19's impact on the US economy.
- Developed custom HTML and CSS stylesheets to present the findings effectively on the project website.

NASA WEAR Challenge

Team Captain

Hampton, VA

Summer 2019

- Prototyped a space suit of Kevlar and chainmail scales that protects astronauts from galactic cosmic radiation.
- Selected as 1 of 5 teams to present at NASA Langley Research Center to NASA space suit design committee.

LEADERSHIP AND COMMUNITY OUTREACH

Dunne Hall

Database, Website, & Merch Commissioner

Notre Dame, IN

April 2022 - Present

- Upkept database of a network for 500+ members and overhauled dorm website to promote dorm culture.
- Created custom dorm merchandise and apparel with Adobe Photoshop, resulting in doubled sales of past years.

Experimental Vehicle Team

Team Captain

Mendota Heights, MN

June 2018 - August 2021

- Led team of 12 engineers in designing and building a human-powered rover ready for a lunar terrain.
- Placed first nationally in NASA Rover Challenge at NASA Space Center in Huntington, Alabama.
- Modeled and assembled 3D tool designs in Fusion360 that take liquid, solid, and core samples of lunar material.

SKILLS AND INTERESTS

Technical: C, C++, Python, Java, Git, HTML, CSS, JavaScript, React, Typescript, Next.js, Tailwind, Node.js, MATLAB, Bash, Assembly, Verilog | TensorFlow, WordPress, Google Suite, Microsoft Office, Adobe Suite, Fusion360, SolidWorks

Interests: Piano Improvisation | Modern Philosophy | Artificial Intelligence | Beach Volleyball | Vinyl Records