I am a data scientist, writer, and ameteur-level wikipedia editor from Northern Michigan

I graduated from the University of Michigan with my master's degree in data science and human-computer interaction in April 2024. I also recieved my bachelor's from Michigan in information science and statistics in 2023. Go blue!

I live in Washington D.C. where I work for the [U.S. Digital Corps](https://digitalcorps.gsa.gov/), a two year fellowship that places early career technologists in high-impact public serve positions. I work on the Center for Medicare and Medicaid's data science research platform team and policy analysis team. Our work supports open science, causal inference in health policy settings, and comparitive evaluation of treatments and patients outcomes.

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I am a computer scientist, writer, and recent graduate of Ohio State University, where I majored in Computer Science and Engineering with a specialization in AI.

Currently I’m living and teaching English and Programming at a rural elementary school in New Taipei City, Taiwan as a Fulbright Scholar. I’m also involved in ongoing NLP and Education research projects at Ohio State and Carnegie Mellon.

NLP is already transforming how students learn, but how can we best leverage them as tools for learners? It isn’t clear to me that a chat interface where you must formulate your own question and receive a wall of text as a response is the best solution..

I’m working on accruing a variety of experiences, I really love teaching, but also enjoy the intellectual thrill of research, and deeply enjoy the collaborative nature of executing on agile projects as part of a team. I hope to pursue a career where I can at least have two of the three. That’s fair right?

Prior to this, I have worked as a software engineer, an English teacher, and (one of my favorite job’s) a kayak instructor.

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AmpleGCG-Plus

AmpleGCG-Plus is a suite of LLMs fine-tuned for ‘jailbreaking’ other LLMs. Our method involved running the GCG algorithm against a few target models and then training a suite of LLMs to learn the distribution of these successful suffixes and generalize to output a successful jailbreaking suffix given any harmful query. Use AmpleGCG-Plus to see if your models are robust to OOD adversarial prompts.

Harmony:

Harmony was built as part of CSE 5514: the AI capstone. It’s a song recommender system meant to scratch the music itches you can only express with vague words and feelings. I fine-tuned Gemini to convert natural language feeling descriptions into Elasticsearch database searches using the Spotify API’s song parameters. We built out the frontend with React, integrated multiple APIs for user accounts, Spotify connectivity, and orchestrated our various dependencies with Flask and Docker Compose. The project was featured in Ohio State’s College of Engineering Capstone Showcase.

Somm:

a reccomendation engine to help newbies navigate the wine market. It won me a top project award in a cohort of 200+ PhD students.

The Legend of Zelda:

Recreated the 1986 Legend of Zelda game from scratch using C# and Microsoft’s XNA framework. Implemented the singleton design pattern for player, state design patterns for player and enemy behavior as well as game states, and the factory design pattern for sprites.

Developed additional DLC, including new enemies and the Master Sword trials inspired by Breath of the Wild.

SSTI’s Business conference website:

During my freshman and sophomore years at Ohio State, I worked as a web developer part-time for the State Science and Technology Institute. I built out their 2022-- 2024 business conference websites using mostly WordPress and some additional work in PHP, HTML/CSS, and a pipeline in Java that converted large amounts of conference data in excel into website content. I also authored training materials for future webmasters.