Matthew Vincent Chou

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EDUCATION:

University of Notre Dame | Expected graduation May 2026
- Major: Computer Science (B.S.)
- Relevant Classes: **Machine Learning** for Embedded System, Intro to **Artificial Intelligence**, **Machine Learning** for Engineers
- 3.75 GPA

EXPERIENCE:

Research Intern - *Notre Dame Center for Research Computing - University of Notre Dame* February 2024 - October 2024
- **Co-authored** a research paper analyzing the effectiveness of LLMs in blending seamlessly into static social media environments to combat the spread of misinformation online (https://arxiv.org/abs/2409.06653)
- Designed and conducted a survey with 1,000+ participants to evaluate the ability to distinguish between human and LLM-generated responses in static contexts
- **Prompt engineered** multiple **LLMs** (GPT-4o, Anthropic Claude, Mixtral, Llama3) to identify LLM-generated responses in a static social media environment

Undergraduate Research Assistant - *EPOCH Lab - University of Notre Dame* February 2023 - October 2024
- Conducted a literature review exploring the relationship between technology and memory development in youth
- Categorized text datasets using qualitative inductive and **sentiment analysis** coding techniques to identify key themes and trends
- Designed and prototyped a mobile app for lost-and-found management, tailored for students and faculty on college campuses

PROJECTS:

Fantasy Basketball Reddit Bot
- Developed and deployed a Reddit bot using **PRAW** API to automate daily content delivery for a subreddit with 925k members
- Designed and implemented a custom web scraper using **Selenium** and **Python** to extract NBA player data
- https://github.com/matthewvchou/fantasy-bball-reddit-bot

Pal-ate
- Developed a gamified food discovery app using **Python**, **ReactJS**, and **Django** to deliver personalized culinary experiences
- Designed and implemented a food recognition camera powered by **neural networks** and **TensorFlow** to identify food items in real time, enhancing user engagement and interaction
- https://github.com/matthewvchou/Pal-ate

Pickup Line Generator
- Developed a recurrent **neural network** (RNN) using Gated Recurrent Units (GRUs) with multiple hidden layers, batch normalization, dropout, and L2 regularization to analyze and rate 1,000+ pickup lines
- Designed an additional **TensorFlow**-based character-level generative model to produce new pickup lines, enabling creative text generation through sequential data training
- https://github.com/matthewvchou/Pickup-Line-Generator

Threaded Messaging Queue
- Developed a POSIX-based client library that interacts with a pub/sub based user application in **C** using concurrent data structures and **multi-threading** to enable real-time communication through a message queue
- https://github.com/nd-cse-30341-fa24/project02-dkim/tree/proj2

ACTIVITIES:

President - *Chinese Cultural Society - University of Notre Dame* May 2024 - Present
- Led and managed the strategic direction, operations, and member engagement of the Chinese Cultural Society, growing the club to over 200+ club members and fostering diversity and appreciation for Chinese culture on campus

Event Coordinator - *Asian American Association - University of Notre Dame* August 2022 - May 2024
- Spearheaded various events including a club excursion to Chicago, multiple club retreats, and assisted in the management of 300+ club members

SKILLS:

Technical: Machine Learning, Prompt Engineering, Python, C, Unix, Git, Github, Qualtrics, MATLAB, HTML/CSS

Languages: English (Native Proficiency), Mandarin (Elementary Proficiency)