Junyuan Wang

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EDUCATION

University of Minnesota, Twin Cities   Sep 2020 - May 2024
Bachelor of Science in Computer Science

SKILLS

Languages: TypeScript, JavaScript, HTML/CSS, Python, C/C++, Java, SQL, LaTeX
Frameworks/Libraries: React, Next.js, Node.js, Express, Tailwind CSS
Tools & Platforms: Git/GitHub, Docker, Unix Shell, VS Code, IntelliJ IDEA, WebStorm, Netlify, Tina CMS
Databases: MySQL
Others: API Integration (OpenAI, Spotify, MapBox GL JS)

RESEARCH EXPERIENCE

Research Assistant | Shortest-Path Finder for UMN Campus | Minneapolis   Jan 2023 – May 2023
- Integrated and rigorously evaluated six distinct path-finding algorithms to determine optimal navigation routes.
- Transformed raw OSM data, via **Overpass Turbo**, into a precise campus layout, enhancing map accuracy.
- Utilized **Python**, **GeoPandas**, and **Matplotlib** to map two campuses into a comprehensive map's graph structure.
- Conducted over 1,800 test runs (6 algorithms x 3 sets of locations x 100 runs) to ensure reliability, repeatability, and accuracy in algorithm evaluations.
- Developed an intuitive and engaging website interface using **Node.js**, **Express**, **HTML**, **CSS**, and **JavaScript**.

PROJECTS

ThisBlog[1] **- Personal Blog Website** | Online   Present
- Developed and deployed a responsive personal blog website utilizing **TypeScript**, **JavaScript**, and **Tailwind CSS**, emphasizing modern design principles.
- Incorporated **Tina CMS** for dynamic content management, enabling seamless edits to blog posts and pages directly on the website.
- Customized styling with Tailwind CSS to achieve an aesthetically pleasing and accessible reading experience, focusing on readability and user engagement.
- Automated deployment processes on **Netlify** for continuous integration and delivery, ensuring the website is always up-to-date with the latest content and features.

A Simple Full-Stack Website | Minneapolis   Jan 2023 – May 2023
- Developed a full-stack application with **Node.js**, **Express**, and **MySQL** for event management in a schedule.
- Enabled event creation, viewing, editing, and deletion through **CRUD** operations.
- Integrated a **login** system with account creation feature and unique email validation and a **logout** functionality across multiple pages.
- Integrated **Pug** for a sleek UI; acclaimed for distinctive CSS designs, excelling by 15%.

Language Model For Music | Minneapolis   Sep 2023 – Present
- Pioneered a personalized music recommendation system by customizing **GPT-3.5-turbo**, showcasing innovation in AI and machine learning.
- Developed and maintained a comprehensive dataset enabling the model to provide diverse music suggestions based on user inputs, covering various moods, genres, and languages.
- Integrated **OpenAI APIs** with **Spotify APIs**, creating a seamless bridge between AI-generated recommendations and Spotify's music library, delivering real-time, personalized music experiences.

RELEVANT COURSEWORK WITH A'S:

Intro to **Artificial Intelligence**, Internet Programming, Program Design & Developments, Intro to Algorithms & Data Structures, Machine Architecture and Organizations, Intro to **Operating Systems**, Intro to **Computer Security**, Machine Learning Fundamentals, **Info Syst & Dig Transformation**, Intro to Quantum Computing