Yash Gupta

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EDUCATION

University of Wisconsin, Madison   Madison, WI

B.S. in Computer Sciences & Data Science, GPA 3.85   *May 2026*

- **Related Courses:** Advanced Data Structures & Algorithms, Distributed Systems, Machine Learning & Data Science in Python, Matrix Methods in Machine Learning, Database Management System Design & Implementation, Algorithm Theory, Operating Systems, Object Oriented Programming, Data Analysis & Statistical Inference in R

EXPERIENCE

Qualcomm   May 2024 - Aug 2024

Software Engineering Intern   *San Diego, CA*

- Collaborated closely with cross-functional hardware and software teams across the SVE division as part of the DragonX Infrastructure team
- Managed and tracked tasks efficiently using Atlassian JIRA, taking ownership of an entire epic related to scheduling optimizations for Snapdragon emulation
- Engineered and deployed efficient, multithreaded Python scripts to preprocess and clean over **50 GB (~110,000 data points) of JSON files** with scheduling log data
- Created real-time data processing pipeline from network drive to SQL database via Python and SQLite3
- Leveraged AWS QuickSight and Matplotlib to reveal trends across time, collect data on past job data, and create visualizations for model
- Led implementation and backtesting of a reinforcement learning Q-learning model for dynamic slot reallocation, reducing wasted time on pending jobs by **28%**
- Contributed to the deployment process, with the model currently in the production phase for the backend of all Snapdragon emulation project scheduling

The Level Company   Jun 2023 - Oct 2023

Product Intern   *Remote*

- Spearheaded development on sequential large language models using GPT-4 and LangChain in Python, automating multi-stage processes for personalized message generation
- Increased engagement rates by designing models that tailored messages to potential advisors, resulting in **significantly higher response rates**
- Collaborated with client services team to utilize Linkedin Sales Navigator to automate finding advisors, sourcing **over 200 new advisors**
- Enhanced reengagement email campaigns using SendGridAPI and Python, leading to a **50% increase in re engagement rates**
- Streamlined profile scraping through LinkedIn APIs, writing Python algorithms to filter JSON data and spreadsheets for relevant fields, reducing manual effort and time

UC San Diego Division of Biomedical Informatics   Jun 2020 - Mar 2023

Intern   *San Diego, CA*

- Pioneered secure medical data transfer using Ethereum blockchain, establishing robust security protocols for sensitive medical information
- Directed front-end development of the user interface for medical data access, using Java and HTML5/CSS3 to create a seamless user experience for hospital staff
- Built backend systems using Solidity, ensuring integration with AWS virtual machines to support blockchain-based data transfer.
- Implemented in **12 university hospitals** with high success rates
- **Co-authored a publication** in JAMIA; presented work at a National Institute of Health conference. [Link to publication]

PROJECTS

enRollBadge | *ReactJS, Tailwind CSS, Python* | enrollbadge.com

- Led a team of 4 developers to create the first software that allows UW Madison students to receive real time notifications when class seats open
- Managed frontend development with ReactJS and Tailwind CSS, implementing a dynamic, searchable table for class management.
- Implemented JSON parsing algorithms in Python to process data received from backend API via Flask integration
- Drove significant user growth with **1,000+ active users** through targeted marketing

Zone In | *ReactJS, ThreeJS, Python, Flask, Langchain* | Devpost

- Spearheaded development on chatbot implemented through Langchain, HuggingFace embeddings, and ChromaDB vector stores that answers zoning queries; generated synthetic dataset via Python for training
- Designed an multi-stage image model for property change visualization using Langchain and custom context systems for preprocessing alongside DALL-E for image generation
- Contributed to frontend development with React JS, Three.js, and Material UI, and backend integration for the models using Flask
- Utilized Google Maps API, Python, and PyPDF to process zoning codes and integrate multimodal data for enhanced user experience and decision-making
- Recognized as **a top 10 project** at Northwestern University's WildHacks 2024

trckr | *Python, SQL, CrewAI, OpenAI, APScheduler* | Demo

- Developed a full-stack web application for automating job application tracking via Gmail and Outlook integration
- Engineered a multi-agent LLM system utilizing CrewAI and OpenAI, which processes thousands of emails to extract structured JSON outputs
- Created custom algorithms for efficient data handling, providing real-time updates on job application statuses through Python, Flask, and APScheduler for asynchronous task management and server load optimization
- Designed and maintained a scalable SQL database, ensuring reliable storage and efficient management of extracted data
- Showcased at Buildspace IRL 2024, garnering **over 50 users on the waitlist**

SKILLS

Programming Languages: Java, Python, C, HTML/CSS, Git, Bash, R, SQL

Web Development: HTML5, CSS3, JavaScript, NodeJS, ReactJS, NextJS, TailwindCSS, Flask, A/B Testing

Frameworks: Tensorflow, PyTorch, ScikitLearn, Pandas, AWS (EC2, Quicksight), SQLite, Selenium, Docker, Spark, Kafka