

# 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