

# Yash Gupta

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## EDUCATION

### University of Wisconsin, Madison

Madison, WI

Bachelor of Science in Computer Science and Data Science, GPA 3.85

Expected May 2026

- **Relevant 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, Linear Algebra, Calculus

## EXPERIENCE

### Software Engineer Intern

May 2024 – Aug 2024

Qualcomm

San Diego, CA

- Collaborated closely with cross-functional teams in the SVE division to optimize Snapdragon emulation job scheduling, managing tasks effectively with my own epic on Atlassian JIRA and participating in sprint planning and standups to ensure alignment
- Engineered multithreaded Python scripts to preprocess **50+ GB** of JSON data, building a real-time data processing pipeline from network drive to an SQL database via SQLite3, and visualized insights for model trends using AWS QuickSight
- Led research, implementation, back-testing, and deployment of a Q-learning reinforcement learning model for dynamic slot reallocation, now in production, reducing wasted time on pending job delays by **28%**

### Product Intern

Jun 2023 – Oct 2023

The Level Company

New York City, NY

- Developed large language models using GPT-4 and LangChain in Python to automate multi-stage personalized message generation, boosting advisor response rates and engagement
- Automated advisor sourcing by integrating LinkedIn Sales Navigator with Python scripts to extract and filter profile data, identifying **over 200 new advisors** and reducing manual effort
- Enhanced reengagement email campaigns using SendGridAPI and Python, resulting in **increased engagement by 50%**

### Research Intern

Jun 2020 – Mar 2023

UC San Diego Division of Biomedical Informatics

San Diego, CA

- Pioneered secure medical data transfer using Ethereum blockchain, implementing robust security protocols integrated with AWS virtual machines and **deployed in 12 university hospitals with high success rates**
- Directed front-end development in Java and HTML/CSS to create a seamless user interface for hospital staff, ensuring usability and efficiency
- **Co-authored** a JAMIA publication and presented work at a National Institute of Health conference

## PROJECTS

**enRollBadge** | ReactJS, TailwindCSS, Python, DigitalOcean, Shell, SQLite3, Flask | [enrollbadge.com](https://enrollbadge.com)

- Led a team of 4 developers to create a platform allowing UW Madison students to receive real-time notifications for open class seats with **1,000+ active users**
- Managed frontend development using ReactJS and Tailwind CSS, designing a dynamic, searchable table for class management
- Implemented backend integration with Flask and Python, including JSON parsing algorithms to process and sync data efficiently

**Zone In** | React JS, Python, Material UI, Three JS, Flask, DALL-E, Langchain | Devpost

- Developed a chatbot using Langchain, HuggingFace embeddings, and ChromaDB to answer zoning queries, supported by a synthetic dataset generated with Python
- Designed a multi-stage image model with Langchain for context preprocessing and DALL-E for accurate property change visualization and integrated to frontend with Flask
- Utilized Google Maps API and PyPDF to process zoning codes and multimodal data, improving user decision-making; recognized as a **top 10 project** at Northwestern University's WildHacks 2024

**trckr** | Python, SQL, AWS S3 & Lambda, CrewAI, APScheduler | [Demo](#)

- Developed a full-stack web application to automate job application tracking via Gmail and Outlook integration, attracting **50+ users** on the waitlist
- Engineered a multi-agent LLM system with CrewAI and OpenAI to process thousands of emails into structured JSON outputs, utilizing Python, Flask, and AWS Lambda for efficient task management
- Designed a scalable SQL database integrated with AWS S3 for reliable storage and optimized data handling, providing real-time job status updates through asynchronous tasks with APScheduler for minimal server load

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, SQL, C, C++, R, Bash, Solidity, HTML5/CSS3, Assembly, LaTeX, Typescript

**Web/App Development:** ReactJS, React Native, TailwindCSS, Flask, Node.js, Django, Material UI, Three.js, Chainlit, Express.js

**Machine Learning & Data Analysis:** Tensorflow, Pytorch, Scikit-learn, Numpy, HuggingFace, ChromaDB, Langchain, OpenAI

**Tools & Platforms:** Git/Github, JIRA, AWS (EC2, Quicksight, S3, Lambda), Docker, Kubernetes, Firebase, Google Cloud, SQLite, PostgreSQL, MongoDB, APScheduler, gRPC, Kafka, Cassandra, Spark, Hadoop, Postman