# YASH GUPTA

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## EDUCATION

**University of Wisconsin, Madison** - *Computer Science + Data Science B.S.* | GPA 3.85                                                                                                May 2026

*Related Courses:* Object Oriented Programming, Advanced Data Structures, Data Management & Statistical Analysis in R, Introduction to Python, Linear Algebra, Machine Organization and Programming, Advanced Data Analysis and Visualization with Python, Discrete Mathematics, Operating Systems, Distributed Systems

## TECHNICAL EXPERIENCE

**Qualcomm -** Software Engineer Intern                                                                                                                                                                 May 2024 - Present
- Working with SVE team under the DragonX software division to optimize scheduling for emulation machines in the Snapdragon chip development process
- Developed and deployed efficient, concurrent Python script to analyze over 50 GB of scheduling log data to plot and identify the breakdown of hardware issues versus software inefficiencies, leveraging Matplotlib for data visualization and internal APIs for comprehensive job data retrieval
- Utilized SQL and AWS QuickSight to reveal trends and collect data on past job data
- Utilizing machine learning, including time series models, to investigate and address scheduling inefficiencies, reducing 28% of wasted time on pending jobs
- Plan to deploy model on all Snapdragon emulation projects by end of internship

**The Level Company -** Intern                                                                                                                                                                             Jun 2023 - Oct 2023
- Created sequential large language models with GPT-4 using LangChain in Python for multi-stage process to generate effective and personalized messages to enable more connections with 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
- Automated reengagement email outreach campaigns using SendGrid API and Python, leading to an increase of over 50% in re engagement rates
- Worked with Linkedin APIs to automate scraping profile information and implemented Python algorithms to filter JSON and spreadsheets for relevant fields

## PROJECTS

**enRollBadge** (enrollbadge.com)
- Created unique software that allowed UW Madison students to receive real time notifications when class seats open
- Led a team of 4 developers to seamlessly integrate the API and scraping functionality to enable efficient data exchange between backend and frontend
- Headed development and continuously maintained on frontend and user interface in ReactJS and Tailwind CSS
- Implemented JSON parsing algorithms in Python to process data received from the backend API
- Developed a dynamic table using ReactJS to display and manage class information, with integrated search functionality.
- Utilized effective marketing strategies resulting in a significant increase in site views, with over a thousand visits, and generated hundreds of new sign-ups within a span of two days.

**Analyzing the Effectiveness of Novel Classification Techniques for Detecting Knee Cartilage Damage**
- Designed machine learning models with accuracy of over 95% to detect knee cartilage ruptures in knee cartilage MRI images early and counter osteoarthritis, outperforming traditional human methods
- Created dataset with Python algorithms that filter, preprocessed, and merged a combination of 1.2 million knee MRI images from different sources
- Utilized Tensorflow and Python to develop and deploy machine learning models on dataset
- Developed precise accuracy metrics to compare effectiveness of different machine learning models to find the most optimal model using SciKit Learn
- Recognized as 1st place in San Diego Greater Science and Engineering Fair and qualifier to California State Fair

**Zone In**
- Developed web application that simplifies urban zoning via LLMs and advanced image generation for visualization
- Led development on chatbot implemented with Langchain that answers zoning queries based on information stored and processed through HuggingFace embeddings and ChromaDB vector stores
- Designed an image model with DALL·E, enabling users to visualize property changes, with preprocessing using LangChain and custom context systems.
- Contributed to frontend development with React JS, Three.js, and Material UI, and backend integration using Flask and Postman
- Utilized Google Maps API, Python, and PyPDF to process zoning codes and integrate multimodal data for enhanced user experience and decision-making.

## 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), SQLite, Selenium, Docker, Spark, Kafka