Rishaan Kumar

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Education

University of Wisconsin-Madison GPA: **3.85/4**

B.S. Computer Science + B.S. Communication Arts (Radio–TV–Film) *Aug. 2022 – May 2026*

Relevant Coursework: *Data Structures and Algorithms, Artificial Intelligence, Operating Systems, Discrete Math, Computer Organization, User Interfaces, Object Oriented Programming, Linear Algebra, Calculus.*

Experience

VideoVerse May 2025 – Present

Software Engineer Intern, Applied AI *Sacramento, CA*

- Current Software Engineering Intern on the Applied AI team at VideoVerse.
- Engineered an internal video player dashboard using **ReactJS, JWPlayer, TailwindCSS** enabling side-by-side evaluation of multiple AI model outputs through stacked, interactive timelines, enhancing debugging clarity and **reducing model evaluation time by 65%.**

DuploCloud May 2024 – Aug. 2024

Software Engineering Intern *San Jose, CA*

- Developed an automated newsletter that integrated the **SalesForce, Domo, and internal APIs** to create distinct visualizations using **seaborn** and **matplotlib** and unique insights tailored to each customer's AWS data.
- Created a **RESTful Flask API** that helped customers compare costs of competitors and returned a customized spreadsheet using **Pandas**. Helped customers **save up to 50%** of their monthly bill.
- Redesigned an automated documentation bot that used the **Slack API** to analyze conversations with **Claude 3.5 Sonnet** to automatically update the public documentation. Currently improving DuploCloud's docs every day.
- Built an active AI tool that auto-transcribes Zoom calls into markdown minutes using **Whisper**, **saving hours of manual work** for weekly team meetings.
- Every project is deployed on DuploCloud's internal network using **Docker**.

Projects

Wrappedly | *ReactJS, TypeScript, OAuth, Tailwind, Docker* April 2025 – Present

- Developed a functional web application that tracks users' Spotify data to give them a report of their top artists and songs during different time frames.
- Integrated the **Spotify API with OAuth in ReactJS (TypeScript, HTML, Tailwind CSS)** to authenticate account information and retrieve personalized song and artist data before processing the information using **JSON parsing algorithms.**
- Utilized **OpenAI's ChatGPT API** to give personalized recommendations by using the users' recent listening history as the data set for the LLM.

MiniSpark | *C, POSIX Threads, Valgrind, GDB* March 2025 – Present

- Built MiniSpark, a lightweight distributed data-processing framework in C, replicating **Apache Spark**'s core functionalities including map, filter, join, and partition operations.
- Improved processing efficiency **by over 40%** through optimized parallel execution and multithreading techniques.
- Conducted rigorous debugging and testing, ensuring code reliability, robustness, and stable performance under various workloads.

Lake Mendota Ice Analysis | *Python, NumPy, Matplotlib, Pandas* January 2025 – Present

- Built a Python-based machine learning pipeline to analyze over 150 years of historical climate data, predicting ice coverage on Lake Mendota.
- Engineered data **preprocessing techniques** to clean and structure archival records, enhancing model convergence with **gradient descent optimization**.
- Achieved **predictive accuracy within 0.01** of the closed-form linear regression baseline; visualized long-term climate patterns through custom time series plots.

Technical Skills

Languages: Python, Java, C, JavaScript, Bash, HTML/CSS, SQL, TypeScript, Go
Frameworks: ReactJS, React Native, Flask, Pandas, Selenium, Matplotlib, PyTorch, Node.js, Bootstrap
Developer Tools: Git, Linux, Docker, JUnit, Postman, Google Cloud, AWS