

MANISH SINGH

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EDUCATION

University of Kansas

Bachelor of Science in Computer Engineering

Lawrence, KS

Aug. 2022 – May 2026

- Recipient of Full tuition scholarship, Honor Roll.
- Member of Association of Computer Machinery, IEEE & KU Robotics.

EXPERIENCE

Undergraduate Research Intern

Dec 2023 – Present

KU Advanced Reconfigurable and Quantum Computing

Lawrence, KS

- Built and maintained simulation scripts for quantum algorithms on AI chips, applying clean and modular coding practices.
- Collaborated with research teams to document simulation workflows and findings, enhancing reproducibility and code clarity for internal use.
- Optimized tensor networks to enhance the efficiency of quantum circuit simulations.
- Contributed to technical papers and posters, developing strong communication skills and attention to technical detail.

TECHNICAL SKILLS

Languages: C++, Python, SQL, JavaScript, HTML/CSS

Frameworks: React.js, Node.js, React Native, Express.js, Next.js, Flask, REST API, Axios, Pygame

Tools: AWS, Git, GitHub, TCP/UDP, Docker, Agile workflows

Libraries: Pandas, Tweepy, NumPy, Matplotlib, TensorFlow, Keras

PROJECTS

bldr - Class scheduler (HackKU' 25 Winner) | *Next.js, Express.js, Supabase, Selenium, BeautifulSoup*

- Developed a web-based course scheduling tool to enable students to plan their semester schedules efficiently, removing need for multiple spreadsheet and papers.
- Engineered a data pipeline to automate the scraping, cleaning, and processing of real-time course registration data using Selenium and BeautifulSoup.
- Structured and stored scraped data in a relational database to support organized and scalable REST API calls from the Frontend.

HackMid Terms Study App | *Next.js, OpenAI API, Firebase, Whisper AI, Flask*

- Developed a web-based tool using Next.js, OpenAI API, Firebase, Whisper AI to automate video summarization for study materials.
- Integrated Whisper AI to transcribe video content, routing the text to a Next.js front-end via a Flask API.
- Implemented AI-powered question generation to create personalized quizzes, improving study efficiency by 30%.

GoWeather | *AWS Lambda, CloudWatch, Python, GTFS, AccuWeather API*

- Built a personal IoT-based commuter assistant to deliver real-time bus arrival and weather updates.
- Integrated PassioGo and AccuWeather APIs to recommend clothes and alert on bus arrival.
- Deployed on AWS Lambda with CloudWatch scheduling for hands-free daily operation.
- Eliminated the need for constant app-checking, improving commute planning and comfort in extreme weather.

Finders-Keepers (Lost & Found App) | *React Native, OpenAI Vision API, Express.js, PostgreSQL, Firebase*

- Integrated react-native-maps to enable real-time mapping of lost and found items in a React Native app.
- Implemented AI-powered item descriptions using OpenAI Vision API, improving search accuracy with fuzzy matching.
- Built a secure backend with Express.js, PostgreSQL, Firebase, and Twilio for authentication and item tracking.