Soham Kundu

github.com/sohamkundu27 • skundu6@wisc.edu • sohamkundu.dev • linkedin.com/in/sohamkundu27 • US Citizen

Education

University of Wisconsin-Madison Madison, WI

Bachelor of Science in Computer Engineering *Expected May 2026*

- Relevant coursework- Data Structures and Algorithms, OOP, Synchronous Sequential Logic Design, Machine and Assembly-Language Programming, Digital Logic Design, AP CSA, Discrete Math, Linear Algebra, Multi-variable

Eagan High School - GPA: 3.90/4.00

Experience

AI Trainer/Evaluator June 2024 – Present

Outlier AI *Remote*

- Completed over 100 tasks across 4 high-impact AI projects, advancing machine learning models in industry
- Evaluated outputs from Large Language Models (LLMs), ensuring accuracy across diverse applications
- Provided expert-level feedback on model performance, identifying optimization opportunities to improve precision, reducing error rates and redundancies, ensuring appropriate responses, and driving continuous model improvement
- Collaborated with cross-functional teams to deploy AI-driven solutions across multiple applications, including ChatGPT, Gemini, and other LLMs, significantly improving AI model's accuracy and instruction-following

Projects

JetBot Autonomous Robot

- Built a functional JetBot using a Jetson Nano, 3D-printed components, and custom electrical assembly
- Designed the robot's chassis using 3D printing, and assembled the components with soldered electrical connections
- Programmed autonomous navigation using Python and Jupyter Notebook, enabling the robot to navigate cluttered and elevated environments through real-time camera input and motor control
- Achieved an end result of a highly responsive, AI-powered robot capable of complex obstacle detection, avoidance, and object recognition

Machine Learning Activity Recommender | *github.com/sohamkundu27/ML-Activities-Recomender-System*

- Designed and developed a dynamic full-stack web application using Python, Flask, HTML, CSS, Bootstrap, and SQL, allowing users to input their age, gender, and time of day, and receive personalized activity recommendations
- Created a synthetic, custom dataset with over 10,000 data points using Pandas and NumPy
- Trained a machine learning model using Scikit-learn's MultiOutputClassifier with a RandomForestClassifier (500 estimators, max depth of 3), achieving 75% accuracy and a 25% hamming loss on test data
- Built an end-to-end ML pipeline with train-test splits and model evaluation for optimal performance.
- Generated a tailored activity list using ChatGPT, incorporating unique options based on user preferences, and displayed how well each activity matched users through a custom percentage-based scoring system
- Implemented a robust SQL database to store user inputs, providing behavior trends and model improvements

Stock Price Checker | *github.com/sohamkundu27/Stock-Tracker*

- Developed a full-stack web application using Python, Flask, HTML, and CSS that allows users to retrieve and visualize stock price data based on ticker symbols and specified intervals (daily, weekly, or monthly).
- Used Alpha Vantage API to fetch real-time stock data and time series info, with error handling for invalid tickers.
- Implemented dynamic data visualization using Matplotlib, displaying stock price trends in an intricate graph
- Designed a responsive interface with Bootstrap, enhancing the user experience on both desktop and mobile devices.

Extracurriculars

Wisconsin Autonomous - Perceptions Team Madison, WI//Sep 2024 – Present

- Developed and optimized machine learning models for autonomous vehicle perception, collaborating with a multidisciplinary team to refine object detection algorithms for robust recognition of environmental elements in dynamic scenarios, enhancing safety and preventing collisions.
- Utilized technologies including OpenCV, PyTorch, and TensorFlow to implement neural networks for real-time image and sensor data processing, contributing to the development of software systems that support real-time decision-making and control mechanisms for autonomous navigation.

Technical Skills

Languages: Python, Java, Javascript, HTML, CSS, MongoDB, SQL
Frameworks/Libraries: Flask, React, Django, Pandas, NumPy, Sklearn, Matplotlib, OpenCV, Pytorch, Tensorflow
Developer Tools: Machine Learning, Git/Github, Jetson Nano, Blender, CAD, MacOS, Windows, Linux