ANUBHOB DEY

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PROJECTS

Enhanced School Bus Safety through GPS Tracking   *August 2024 - present*

- Implemented a real-time GPS-based tracking solution to improve student safety by optimizing route data in real-time.
- Utilized scalable cloud solutions to handle large data volumes, ensuring high availability and reliability.
- Integrated a user interface for drivers and parents, providing real-time alerts and route notifications.
- Established secure, encrypted data transmission protocols to ensure privacy compliance and safeguard sensitive information.

Automated Web Scraping Pipeline with LangChain, Selenium and Scrapy *August 2024 - September 2024*

- Developed a dynamic web scraping app that extracts structured data from various websites.
- Applied incremental data processing, integrating data into a Large Language Model (LLM) pipeline for optimized, multi-sample outputs.
- Optimized the scraping algorithm to improve data retrieval speed by 20%, enhancing pipeline efficiency.
- Automated data preprocessing steps, transforming raw data into clean using beautiful soup, structured formats ready for analysis.

Real-Time Sign Language Translator with TensorFlow Lite & Raspberry Pi   *January 2024 – May 2024*

- Engineered a data collection pipeline for sign language, enabling accurate model finetuning for translation tasks.
- Deployed on Raspberry Pi, allowing seamless, on-the-go translation with minimal latency.
- Optimized TensorFlow Lite model for embedded device constraints, reducing memory usage and inference time.
- Integrated real-time feedback, allowing users to adjust sign language gestures for better recognition accuracy.

CERTIFICATIONS

- CS50x: Harvard University's Introduction to Computer Science   (*September 2023 - June 2024*)
- CS50p: Harvard University's Introduction to Python Programming   (*July 2024 – October 2024*)
- AWS Certified Machine Learning: Problem Framing & Algorithm Selection (*March 2024 – April 2024*)

EDUCATION

University of Engineering and Management, Kolkata, WB
B. Tech in Computer Science & Engineering (AI & ML) — August 2020 – present   **CGPA:** 8.43/10

B. D. M. International, Kolkata, WB
Senior Secondary — April 2020 - May 2022

Secondary — April 2018 - March 2020

LEADERSHIP EXPERIENCE, INTERESTS & AWARDS

- Volunteer Teaching Assistant: Mentored over 50 students with the *Shiksha for All* NGO.
- Fundraiser: Raised awareness and funds for climate action with the Green (R)evolution Organization.
- Awards: Named "Tech Wizard of the Year" for exceptional performance in tech-related initiatives.
- Interests: Chess enthusiast; founded a local chess club for seniors.

SKILLS

Technical Skills: LLM Fine-tuning, Web Development, Software Development, Database Design & Optimization, Client Relations, Code Refactoring, Data Structures & Algorithms, Object-Oriented Design, HuggingFace Trainer
Programming Languages: Python, SQL, Unix, Java
Databases: MongoDB, MySQL, Oracle
Cloud Technologies: Amazon EC2