Dev Parikh

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TECHNICAL SKILLS

Languages and Frameworks	:	Python, Django, Flask, JavaScript, Node.js, React.js, Next.js, HTML, C, C++, SQL, Solidity
Libraries	:	TensorFlow, OpenCV, Pandas, NumPy, Scikit-learn, Pytorch, Pyspark, Hadoop
Databases	:	MySQL, PostgreSQL, and MongoDB
Tools	:	AWS (S3, AWS Glue, EC2, Amazon DynamoDB, AWS Lambda), SanityIO**,** Git, JIRA
Hardware	:	Unicorn Hybrid EEG Cap**,** Kinova arm, ARDUINO UNO, Raspberry Pi

PROFESSIONAL EXPERIENCE

Researcher, Vinjamuri Lab, UMBC — Oct 2024 – Present
- Successfully controlled Kinova robotic arm with the EEG signals from brain collected by Unicorn Hybrid EEG cap.
- My ongoing research includes using brain-computer interface (BCI) in controlling robotic arms for people with severe mobility impairments.

Machine Learning Intern, Codage Habitation, Gujarat, India — Sept 2023 – Jan 2024
- Developed a customer churn prediction model for a bank using an input layer and two hidden layers with Rectified linear unit (ReLU) activation and an output layer with sigmoid activation that helped to achieve an 86% accuracy rate.
- Developed a live video streaming face detection system using Haar Cascade Classifier from the OpenCV library.

Full Stack Developer, Codage Habitation, Gujarat, India — Nov 2021 – Aug 2023
- Restructured and redesigned the company's existing static website to incorporate dynamic content by integrating SanityIO as a backend service with NextJs as a frontend platform using GROQ and GraphQL queries.
- Developed a CRM application using NodeJS for creating REST API and next.js for designing a dashboard to create and manage project tasks.
- Developed an employee activity monitor using the pynput library to listen for mouse and keyboard activities, pillow library to monitor an employee's on-screen activity, and ReactJS to create an admin dashboard and authentication by JSON web tokens (JWTs).
- Co-developed backend service for a non-profit educational website using Django framework to create REST and GraphQL APIs and PostgreSQL and AWS S3 bucket for data storage.

Web Development Intern, Frontend Army, Gujarat, India — Aug 2021 – Oct 2021
- Developed a marketing website "**volz.ua**" using GatsbyJS for frontend development and SanityIO for content management.

PROJECTS

Unmanned Aircraft System Risk Analysis – Graduate Project (Github)
- Analyzed the flight track points data collected from the OpenSky network and UAS sightings data collected from the Federal Aviation Administration website (104GB parquet files) using **PySpark** and **AWS Glue** and Co-developed a detailed risk analysis report analyzing risk factor of collision of an aircraft with UAS for various airports in the US.
- Developed an interactive map highlighting high-risk zones where the permitted ceiling height for UAS is prone to mid-air collision of an aircraft with UAS.

Airline performance and safety analysis – Graduate Project (Github)
- Developed a report analyzing the delay and crash incidents of popular US airlines during 2023 and 2024 using **Python** and **Seaborn** to incorporate useful visualizations that helped users select optimal airlines for safe and reliable travel.

Los Angeles Police Department Crime Data Analysis – Graduate Project (Github)
- Conducted comprehensive data analysis using **Python** and **Plotly** to analyze the crime incidents from 2010 to 2024 which were gathered from the Los Angeles Police Department's public website (CSV 72GB).
- Utilized principal component analysis techniques to minimize the number of useful features to prepare data for further model development.

Smart Auto Irrigation System – Undergraduate Project
- Led a team to develop an auto irrigation system using Arduino Uno resulting in 30% water conservation.
- Developed a mobile application for remote monitoring and control of the irrigation system.

EDUCATION

University of Maryland, Baltimore County, Baltimore, MD
Master of Professional Studies: Data Science, **GPA: 4.00** — Jan 2024 - Present

Gujarat Technological University, Ahmedabad, Gujarat, India
Bachelor of Computer Engineering, **GPA: 3.25** — Jun 2019 - May 2023