Susanta Gope

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Projects

ParkVision - Smart Car Parking | *Django, React.js, OpenCV, TensorFlow/PyTorch, YOLO* Aug. 2025 – Present

- Engineered a full-stack smart parking system using Django REST Framework, PostgreSQL, and React.js for real-time parking management.
- Integrated OpenCV to simulate animated car movement and dynamically visualize slot occupancy.
- Designed an AI-driven predictive model to forecast parking slot availability, minimizing vehicle waiting times.
- Implemented a waiting queue system to calculate estimated waiting time when all slots are occupied.
- Developed REST APIs to provide real-time parking data and analytics to the frontend dashboard.
- Generated actionable parking analytics including peak hours, slot occupancy trends, and average waiting times for informed decision-making.
- **GitHub:** https://github.com/susanta7029/Smart-Car-Parking

ChatterPulse - Real Time Chat | *Django, Channels, Redis, React, WebSockets, OpenAI* Apr. 2025 – May. 2025

- Developed a full-stack real-time chat application using Django Channels and WebSockets for bi-directional communication.
- Integrated a GPT-based AI assistant using the OpenAI API to deliver intelligent, real-time, and context-aware responses within live user chat sessions, enhancing interactivity and user experience.
- Designed a responsive frontend with React.js, connected via REST APIs and WebSocket endpoints.
- Implemented secure authentication with JWT tokens, supporting protected routes and role-based access control.
- Modeled PostgreSQL database schemas to manage users, chat messages, and history efficiently.
- **GitHub:** https://github.com/susanta7029/Real-Time-Chat-Application

InsureLytics - Health insurance cost prediction. | *Python, Scikit-learn, Streamlit, Pandas* Nov. 2024 – Dec. 2024

- Built machine learning models (Linear Regression, Random Forest) to predict insurance charges based on demographic data.
- Performed data preprocessing using Scikit-learn pipelines, including cleaning, imputing missing values, one-hot encoding, and scaling features for model training.
- Conducted exploratory data analysis (EDA) using Seaborn and Matplotlib to identify cost-influencing features like BMI and smoking.
- Achieved an R^2 score of 87% on the test set, improving performance by over 9% compared to Linear Regression.
- Deployed a Streamlit app for real-time prediction with full ML pipeline from data cleaning to deployment.
- **GitHub:** https://github.com/susanta7029/health-insurance-predictor

Certificates

- Cloud Computing — NPTEL — Apr. 2025
- Data Structures and Algorithms — GeeksforGeeks — Aug. 2024
- Getting Started with AI and Machine Learning — LinkedIn — Jul. 2024
- Programming in C++, A Hands-on Introduction — - Coursera — May. 2024

Technical Skills

Languages: Python, Java, C++, C, JavaScript
Frameworks Tools: HTML, CSS, Django, FastAPI, Streamlit, Tableau, Docker
Libraries: Scikit-learn, Pandas, NumPy, Seaborn, Matplotlib
Database/Platforms: MySQL, Excel, Google Colab, Git, GitHub, VS Code
Concepts: EDA, Feature Engineering, Regression Models, Data Cleaning, DSA

Education

Lovely Professional University — Phagwara, Punjab
Bachelor of Technology in Computer Science and Engineering - CGPA: 7.75 — *Since Aug. 2022*

Indpur Goyenka High School — Bankura, West Bengal
Intermediate - 92.4% — *Apr. 2019 – Mar. 2021*

Bansidi High School — Bankura, West Bengal
Matriculation - 85% — *Apr. 2018 – Mar. 2019*