Ujit Kumar

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EDUCATION

- **IIT Madras** Chennai, India
  Bachelor of Science in Data Science and Applications: CGPA: 7.2 *Dec. 2020 – Dec. 2024*

PROJECTS

- **Culinary Efficiency: Revolutionizing Restaurant Performance** Jun 2023 - Present
  - Collaborated with a fast food restaurant to optimize sales and profitability. Currently analyzing sales data using Python tools (pandas, numpy, matplotlib) and Excel. Applying the Pareto Principle to identify key areas for revenue enhancement. Utilizing advanced data visualization techniques to provide insights for effective decision-making.
  - Developing a custom Python application to seamlessly transition the restaurant from offline to online sales data storage, ensuring real-time access to critical insights. Expected outcomes encompass enhanced operational efficiency, increased sales, improved profitability, and an advanced data storage infrastructure with proper security.

- **WindMill Power Prediction: Optimizing Energy Generation** April 2023 - May 2023
  - Engineered a Python-based ML model to forecast windmill power output.Implemented LSTM model for wind speed prediction, combined with a linear regression model to estimate power generation.Achieved an impressive 98% accuracy by training the model on GPU for speed and efficiency.Utilized dataset spanning five years(50 lakh data set).
  - Captured wind speed patterns for precise predictions.Ensured model effectiveness through rigorous data analysis using Pandas, Seaborn, and NumPy.Engineered features, preprocessed data, and optimized model performance.Utilized pandas and numpy for interpolation to fill empty data.Enhanced predictions with xgBoost and scikit-learn.

- **BlogHub: Centralized Blogging Community** Jan 2023 - April 2023
  - Designed and developed a scalable multi-user blog web app in Python and Flask,following SOLID principles and MVC design.Implemented a secure Restful API for user interactions and image sharing.Utilized SQLAlchemy ORM for efficient data management and Swagger/Postman for API testing.Deployed the app using Docker for scalability
  - Integrated Celery for task scheduling and user engagement functionalities.Improved API performance with caching and Redis integration.Introduced Daily Reminder Jobs and monthly engagement tasks using Celery.Integrated SMS/ email reminders using Twilio API and SMTP package.Optimization improved response times and scalability.

- **MediDiagnose: Real-Time Human Disease Prediction using ML** June 2022 - July 2022
  - Created a Python-based machine learning application that utilizes the Support Vector Classifier(SVC) algorithm in Jupyter Notebook to predict human disease. Carried out data processing from CSV using NumPy and Pandas.
  - Trained the dataset using sklearn on CPU. Used linear kernel functions to optimize the model performance. Evaluated the model using confusion matrix and plotted the result with Matplotlib, achieving an accuracy of 94 %.

SCHOLASTIC ACHIEVEMENTS AND AWARDS

- Qualified SnackDown - CodeChef — 2021
- Achieved a top 20 ranking among participants from all over India in the Space Olympiad — 2019
- Achevied 1st Rank in the Regional Level (KVS) Science Exhibition — 2019

EXTRACURRICULARS

- Secured Top 80 Intra college Rank in Trading — 2023
- Participate in Intra College Table Tennis match — 2021
- Got selected as One of the students to attend the Student-Scientist Interaction (JIGYASA) — 2019

SKILLS

Programming: Python, Java **Database:** MySql **Data Science:** NumPy, Matplotlib, Pandas **Machine Learning:** scikit-learn, Tensorflow **Frameworks:** Flask, Scrapy **IDE:** VS Code, PyCharm **OS:** Windows, Ubuntu **Deployment:** Docker, Git

INTERESTS

Computer Games, Cricket, Watching Movies, Cooking, Travelling