Projjal Bhattacharyya

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TECHNICAL SKILLS

- **Programming Languages** - Java, Python, R, JavaScript, HTML, CSS
- **Frameworks** - Flask, Streamlit, Gradio, Bootstrap, FastAPI
- **Tools & Databases** - MySQL, MongoDB, PostgreSQL, Power BI, Tableau, MS Excel, AWS (Familiar), Docker, Hadoop, Apache Spark, LaTeX, Markdown, Hugging Face, RStudio, Ubuntu, Jupyter Notebook, Git, GitHub
- **Libraries** - Matplotlib, Seaborn, pandas, NumPy, scikit-learn, TensorFlow, PyTorch, Keras, ggplot, OpenCV

PROJECTS

HealthDesk - Multiple Diseases Prediction System | LINK | CODE *Dec 2024 - Feb 2025*

- Developed and deployed a healthcare portal that enables forecasting of heart disease, lung cancer risk, diabetes, and Parkinson's disease with an impressive accuracy of over **95%**.
- Conducted thorough data analysis of four distinct datasets, extracted meaningful insights through data visualization techniques, and identified the best classification model through rigorous model evaluation.
- Applied feature scaling and encoded categorical variables, which led to a **24%** performance improvement.
- Demonstrated commitment to ethical data practices while contributing to the development of data-driven healthcare solutions **- Matplotlib, Seaborn, NumPy, pandas, scikit-learn, joblib, Streamlit.**

FieldWise - Smart Agriculture Portal | LINK | CODE *Sep 2024 - Nov 2024*

- Built a website for farmers capable of predicting potato plant disease, forecasting annual crop yields, and providing customized crop planting recommendations along with interactive graphs.
- Achieved accuracy greater than **97%** across all three models using optimization and hyperparameter tuning.
- Performed feature extraction and trained a CNN for potato plant disease classification, complemented by classification and regression models for crop yield and planting recommendations.
- Managed data integrity by handling missing values, addressing outliers, and removing duplicate rows, which enhanced quality by **33% - TensorFlow, Keras, OpenCV, NumPy, HOG, pandas, scikit-learn, Streamlit.**

Sentify - Sentiment Analysis Website Application | LINK | CODE *Mar 2024 - Aug 2024*

- Designed and developed a responsive web app that can detect sentiments from images, audio, and text inputs.
- Implemented a CNN model for image and audio classification and an LSTM model for text classification.
- Minimized training time by **90%** and optimized memory efficiency by **23%** using PCA and ensemble technique.
- Mitigated class imbalance using SMOTE which boosted performance by **15%**. Increased user engagement by **30%** with illustrated graphs **- TensorFlow, Keras, NLP, OpenCV, HTML, CSS, JavaScript, Chart.js, Flask, Render.**

CERTIFICATES

Deep Learning Specialization (DeepLearning.AI) | CERTIFICATE *Feb 2025 - Present*

- Learned about Neural Networks, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Models, Hyperparameter Tuning, Regularization and Optimization.

Machine Learning Specialization (DeepLearning.AI, Stanford Online) | CERTIFICATE *Mar 2024 - Jun 2024*

- Acquired expertise in Supervised Machine Learning: Regression and Classification, Advanced Learning Algorithms, Unsupervised Learning, Recommenders and Reinforcement Learning.

Mathematics for Data Science Specialization (DeepLearning.AI) | CERTIFICATE *Mar 2024 - Jun 2024*

- Mastered fundamentals of Linear Algebra, Calculus, Probability, and Statistics essential for Data Science.

EDUCATION

Kalyani Mahavidyalaya Kalyani, India

Bachelor of Science (HONORS) - Computer Science; CGPA: 7.6 *Jun 2021 - Aug 2024*