Debayan Dutta

Email: ddebayan09@gmail.com
Mobile: +91 6290915254

Github: https://github.com/Debayan-Dutta
LinkedIn: https://www.linkedin.com/in/debayan-dutta-115882217/

1.5+ years of experience in Data Science, seeking new opportunities to leverage expertise and grow further. Skilled in developing and deploying machine learning models, with a strong interest in learning advanced ML and deep learning algorithms. Possess excellent communication skills and a hands-on approach to solving complex problems.

Education

- **Ramakrishna Mission Vivekananda Educational and Research Institute** — Howrah,West Bengal
  Masters in Big Data Analytics — *Sept 2021 - July 2023*
  Courses: *Machine Learning,Deep Learning,Time Series,Data Structures and Algorithms, Artificial Intelligence,Probability and Statistics, Optimization,Natural Language Processing*
- **Calcutta University** — Kolkata,West Bengal
  Bachelor in Mathematics — *July 2018- July 2021*

Technical Skills

- **Languages**: Python,R
- **Database**: MySQL
- **ML-Algorithms**: Supervised and Unsupervised Ml Algorithms
- **Deep Learning-Algorithms**: CNN,RNN,LSTM,GAN,etc.
- **NLP**: Text Summerization, Topic Modelling, Sentiment Analysis(visual and text)
- **Cloud Service**: Azure DataBricks
- **Libraries**: PySpark,Numpy Pandas,ScikitLearn, NLTK, SpaCy, TensorFlow, Keras, etc.

Experience

- **ERNST AND YOUNG LLP** — Remote
  Data Scientist — *July 2023 - Present*
  - **Demand Forecasting for Consumer Goods**: Developed predictive models using ARIMA, XGBoost, and Random Forest in PySpark on Azure Databricks to forecast consumer demand, optimizing inventory management and reducing stockouts.
    Processed and analyzed large datasets (historical sales, market trends, seasonal patterns) to achieve high forecast accuracy and improve supply chain efficiency.
    Conducted Root Cause Analysis (RCA) based on client queries to identify forecasting issues and enhanced machine learning algorithms for better accuracy.
    Efficiently implemented solutions across three markets, addressing unique challenges and improving demand predictions.
- **Sravathi AI Technology Pvt Ltd** — Onsite-Bangalore
  NLP Scientist Trainee — *Jan 2023 - Jun 2023*
  - **Research Paper Summarization**: Developed and implemented summarization models to process and summarize research papers, integrating these models into a search engine. This solution provided concise summaries to assist researchers in quickly accessing key insights from academic literature, improving research efficiency.
  - **Web-Scraping**: Used web scraping techniques to collect drug names and formulas from various online sources, ensuring accurate and comprehensive data collection for analysis..

Projects

- **Named Entity Recognition using Deep Neural Models (Indian Association for the Cultivation of Science, Under the Guidance Dr.Debarshi Kumar Sanyal)**: Developed a model for recognizing nested named entities within text using deep neural networks. Applied computer vision techniques, specifically the YOLO (You Only Look Once) algorithm, to detect and classify complex, overlapping entities efficiently, improving the accuracy and speed of entity recognition in large text datasets(Jun 2022-Jan 2023)
- **Sentiment Analysis of Internet Memes**: Processed the image component of memes using VGG-19 and the textual content with Transformer-BERT, combining both to predict the overall sentiment of the meme. (Sep 2022 – Dec 2022
- **Comparative Study of Optimization Algorithms on German Traffic Sign Recognition Benchmark (GTSRB) Dataset**: Conducted a comprehensive study on the performance of various optimization algorithms (e.g., SGD, Adam, RMSprop) using a CNN model for traffic sign classification on the GTSRB dataset. The project involved training and evaluating the CNN with different algorithms to analyze their impact on accuracy, convergence rate, and computational efficiency. Key tasks included data preprocessing, model training, hyperparameter tuning, and performance evaluation, resulting in insights that optimized model accuracy for traffic sign recognition tasks. (March 2022 - Jun 2022)
- **Suspicious Activity Detection Using Surveillance Footage**: Developed a model that can be deployed in surveillance system to detect suspicious activities in real-time using video analysis. Employed a Slow-Fast Network architecture to process raw video footage at different speeds, allowing the model to capture both fast and slow movements effectively. The "Slow" pathway captured spatial semantics over a longer time frame, while the "Fast" pathway focused on rapid actions, enhancing the detection of abnormal or suspicious behavior. This approach improved the accuracy and efficiency of surveillance systems by leveraging the strengths of both pathways in video modeling. (March 2022 - Jun 2022)

Certificates

- Spark and Python for Big Data with PySpark,Udemy
- Fundamentals of Reinforcement Learning,Coursera
- Machine Learning Data Lifecycle in Production,Coursera

Honors and Awards

- DST-Inspire Scholarship awardee for being top 1% in Higher Secondory Exam

Interests

- Reading Fiction and non-fiction
- Playing Badminton
- Watching Movies