SHIVA KARTHIK PINJARLE MANMOHAN

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Innovative Data Scientist proficient in Machine learning, Deep learning, and Statistical Analysis. Skilled in simplifying and optimizing complex predictive models, NLP and Cloud technologies, harnessing Artificial Intelligence to drive smarter business decisions

EDUCATION

New Jersey Institute of Technology – MS in Data Science, Newark, NJ, USA ***Sep 2023 - Dec 2024***
Coursework: Machine Learning, Deep Learning, NLP, Data Analytics with R, Image Processing (GPA 3.65/4)
BBCIT, Osmania University – Bachelor's in Computer Science, Hyderabad, TS, INDIA ***Jun 2018 - Jul 2021***
Coursework: Mathematics, Statistics, Java, OOPs, C++, Database Management (GPA 3.8/4)

TECHNICAL SKILLS

Programming Languages: Python, SQL, R, NoSQL, JavaScript, Snowflake
Big Data & Cloud: AWS (Rekognition, S3, EC2, SageMaker), Apache Spark, Hadoop, HDFS, Oozie, Scala, GCP
Data Visualization & BI: Tableau, Power BI, Matplotlib, Seaborn, Excel(Pivot Tables, VLOOKUP), Google Sheets
Machine Learning & Lib: Regression (Linear, Logistic), Decision Trees, Random Forest, SVM, PCA, LLM's Boosting (XGBoost, LightGBM), NLP (BERT, Transformers), A/B Testing, Scikit-learn, Pandas, Numpy
Software Engineering Practices: CI/CD Pipelines, Version Control (Git), Agile, Scrum, Kubernetes (K8s), Docker
Deep Learning: ANN, CNN, RNN, PyTorch, TensorFlow, Keras, HuggingFace
Skills: LaTeX, Jupyter Notebook, RStudio, Descriptive Statistics, Hypothesis Testing, Probability, Experimental Design
Certificates: Generative AI & LLMs from DeepLearning.AI, Advanced Data Analysis using MS Excel

EXPERIENCE

Junior Data Scientist | Innomatics Research Labs, Telangana, India ***Jan 2022 – Aug 2023***
Applied K-means clustering and logistic regression to analyze customer behavior patterns and segment high-value customers

- Developed predictive churn detection models leveraging feature engineering, PCA, hyperparameter tuning, and regularization techniques, improving 20% retention rate and reducing false positives by 12%
- Built and maintained end-to-end machine learning pipelines on AWS using Docker and MLflow, integrating ER modeling to optimize database performance and ensure data integrity for production model deployment
- Automated model deployment with CI/CD pipelines, reducing deployment time by 15%, by using Agile principles
- Designed and deployed 5+ interactive Tableau dashboards powered by real-time SQL pipelines, by tracking financial complaints and enabling faster resolutions
- Applied BERT for sentiment analysis, emotion recognition, and topic modeling to analyze customer feedback that increased engagement by 9% and sales by 13%
- Launched a Customer Outreach Program, successfully converting 18% of dissatisfied customers and reduced churn by 12%
- Maintained a web analytics platform using Python, Flask, SQL, automating data processes and improving team efficiency
- Collaborated closely with cross-functional teams (marketing, product, and engineering) to support business goals
- Recognized as "Best Performer of the Month" for delivering timely solutions and consistently meeting performance targets

PROJECTS

Bias Detection and Mitigation in LLM-Generated Text | NJIT

- Engineered a system to detect and visualize biases in LLM-generated text across demographic factors (gender, race, age, socioeconomic status), enhancing model trustworthiness and mitigating harmful stereotypes in AI outputs
- Leveraged AIF360 and FairSeq for bias identification and compared multiple pre-trained models like (GPT-2, BERT)
- Regulated multilingual analysis, focusing on Indian languages, to explore the intersection of language, culture, and bias

Comparative Study of End-to-End Training and Layer-Wise Training in Neural Networks | NJIT

- Architected the complete codebase for the Coordinate Descent algorithm from scratch, creating a robust neural network training system in Python
- Succeeded 97.06% (SGD) and 97.80% (CD) test accuracy, supported by parameter norm and loss curves.
- Designed a layer-wise training pipeline for a 3-layer neural network, optimizing it using different optimization algorithms
- Evaluated parameters and performance metrics to ensure consistent convergence and optimal model training outcome

Potato Leaf Disease Classification System with a Neural Approach to Invariant Feature | NJIT

- Implemented and executed a Convolutional Neural Network (CNN) for multi-class image classification of potato leaf diseases, resulting in a 20% reduction in misclassification rate by applying image normalization procedures
- Enhanced robustness through shuffled pixel testing and refined predictive modeling by diverse augmentation strategies
- Utilized ResNet-50 for feature extraction and integrated SVM with pricing models and statistical algorithms, improving accuracy by 15% and enabling continuous optimization through performance metrics