Prinkle Singharia

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Education

MS in Artificial Intelligence | Northeastern University | Boston, MA — Expected May 2025
Coursework: Machine Learning, Data Mining, Algorithms, Foundations of AI, Natural Language Processing, DBMS — **GPA: 3.5/4**

BE in Computer Engineering | University of Mumbai | India — Oct 2020
Coursework: Statistics, Linear Algebra, Data Structures, Advanced Algorithms, Cloud Computing, Big Data Analytics — **GPA: 8.9/10**

Work Experience

Teaching Assistant – Mobile App Development Course | Northeastern University | Boston, MA — **May 2024 – Dec 2024**

- Mentored 80+ students in Android App Development using Java and Android Studios providing guidance on Object-Oriented Programming, XML Design Layouts, MySQL Integration, Firebase API Usage and Git workflow

System Engineer – Machine Learning | Tata Consultancy Services | India — **Sep 2020 – Aug 2023**

- Conducted quantitative analysis on a large-scale dataset consisting of 1M+ customer booking records using clustering algorithm and processed data through AWS S3, AWS Glue, and AWS CloudWatch to identify booking patterns, creating investment decisions program that increased repeat bookings by 15%
- Built predictive models on AWS SageMaker to evaluate profit and loss metrics, enabling strategic collaborations with the top 10% revenue-generating hotels and credit card providers, resulting in optimized profitability and business operations
- Developed a time-series forecasting model using AWS Lambda and integrated AWS CloudWatch for monitoring, analyzing origin/destination cities, capacity, and seasonality trends, improving route planning efficiency by 20%
- Applied regression models, feature engineering, and ETL/ELT pipelines on EC2 within the SDLC to visualize seasonal trends such as summer peaks, estimating a 10% surge in demand and enabling targeted marketing campaigns to maximize revenue
- Designed and deployed business intelligence dashboards using Tableau and AWS QuickSight to visualize booking patterns, route performance, and seasonal trends, supporting market segmentation and competitive analysis for strategic decision-making
- Collaborated with Agile teams using Atlassian tools of Jira, Bitbucket, and Confluence to enhance workflow efficiency

Projects

End-to-End Conversational AI Chatbot for Food Delivery | Dialogflow | MySQL | Python

- Designed and deployed an end-to-end NLP chatbot for a food delivery system using Dialogflow, FASTAPI, and MySQL, enabling automated order placement, tracking and customer support
- Configured intents, entities and contexts in Dialogflow to handle natural language queries and built APIs in FASTAPI for seamless interaction between the chatbot and the MySQL database
- Improved customer service efficiency, reducing response time by 30% and enhancing engagement through automated interactions

AI Powered Text Classification System | Python | VScode | MLFlow

- Designed and deployed a scalable text classification pipeline using BERT, addressing natural language understanding (NLU) challenges in document categorization and organization
- Implemented a transformer-based BERT model using Huggingface, achieving high accuracy in text classification, and applied TF-IDF with SVM for feature extraction and performance enhancement
- Integrated MLFlow to streamline the machine learning lifecycle, enabling reproducible experiments and model versioning

Sports Commentary generation using Merge Model | Python | Jupyter Notebook | Terraform

- Built a predictive model for automated commentary generation from video frames using VGG-16, LSTM and a Merge model, utilizing transfer learning, achieving a BLEU-4 score of 72.7%, enhancing user engagement
- Led a team in processing 4000+ cricket video frames and integrating advanced computer vision and Natural Language Processing techniques of LLMs, and a Merge model, improving commentary generation accuracy by 20%
- Developed and maintained Terraform scripts for cloud infrastructure, ensuring seamless deployment pipelines

Skills

Programming Languages: Python, R, Java, Swift, SQL (Relational Databases)
Cloud Technologies: AWS S3, Datalakes, Cloudwatch, Kubernetes, Terraform, Apache Spark, Google Dialogflow
Tools and Technologies: Jupyter Notebook, Conda, Excel, PowerBI, Plotly, MLFlow, Tableau, Jira, Git, Bitbucket
Libraries: Pandas, Tensorflow, Keras, Huggingface, NLTK, Scikit-Learn, NumPy, Scipy, OpenCV, PyTorch
Testing: Unit Testing, A/B Testing, Integration Testing, Deployment Testing

Accomplishments

Certifications:

- Clustering Geolocation Data Intelligently in Python
- Applied AI with Deep Learning (Authorized by IBM)
- Python Data Structures
- Custom Prediction Routine on Google AI Platform
- Data Analytics for Business
- Finance for Everyone: Markets

Publications:

- Depression Detection using speech as Input Signals