

# Prinkle Sanjay Singharia

Boston, MA • (617) 505 - 2801 • [singharia.p@northeastern.edu](mailto:singharia.p@northeastern.edu) • [linkedin/prinkle-singharia](https://www.linkedin.com/in/prinkle-singharia) • [MyPortfolio](#) • [GitHub](#)

## EDUCATION

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

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

## WORK EXPERIENCE

**Teaching Assistant – Mobile App Development Course** | Northeastern University | Boston 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
- Delivered 20+ debugging sessions and organized weekly workshops aligning app development with product strategy principles, augmenting processes for structured learning

**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 of structured as well as unstructured data, implementing 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% aiming to unlock new growth opportunities for an international airline
- Applied regression models, feature engineering, and **ETL/ELT pipelines** on **AWS EC2** and **RDS** to uncover seasonal trends such as summer peaks, estimating a 10% surge in demand and enabling targeted marketing campaigns to maximize revenue
- Designed and deployed dashboard solutions using **Tableau** and **AWS QuickSight** to visualize booking patterns, route performance, and seasonal trends, enabling real-time decision-making for marketing and operations teams

## PROJECTS

**Customer Segmentation and Recommendation System** | Python | Jupyter Notebook | Plotly Oct 2024 – Dec 2024

- Conducted **EDA** and **RFM analysis** on retail customer data to identify purchasing patterns, applying **K-means clustering** optimized with the **elbow method** and **silhouette scores**, improving segmentation accuracy by 15%
- Built a content-based recommendation system using **Scikit-learn** for similarity scoring and **TextBlob** for sentiment analysis, and designed **Plotly dashboards** with 3D visualizations to communicate insights and personalized marketing strategies to stakeholder

**AI Powered Text Classification System** | Python | VScode | MLFlow May 2024 – June 2024

- Designed and deployed an AI-driven system for **NLP** based automatic text classification of news articles, incorporating a pipeline for text processing, model training, and deployment for applications like document organization and content filtering
- 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 augmentation, reproducible experiments, model versioning, and systematic development management

**Sports Commentary generation using Merge Model** | Python | Jupyter Notebook | Terraform Jan 2024 – April 2024

- 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

## TECHNICAL SKILLS

- Programming Languages:** Python, R, Java, Swift, SQL (Relational Databases)
- Cloud Technologies:** AWS, Kubernetes, Terraform, Apache Spark, Google Cloud Platform
- Tools and Technologies:** Jupyter Notebook, Conda, Excel, PowerBI, Plotly, MLFlow, Tableau, Jira, Git, Agile, 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](#)