ANIRUDDHA CHAUDHARI

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TECHNICAL SKILLS

Programming Languages: Python, R
Machine Learning & Data Science: Scikit-Learn, TensorFlow, NLP (SpaCy, NLTK), NumPY, Pandas, PyTorch, XGBoost, LightGBM, CatBoost, Feature Engineering, Model Optimization
Database Management: MySQL, SQL, NoSQL, Snowflake
Data Visualization & Analytics: Power BI, Tableau, Matplotlib, Seaborn
MLOps & Deployment: Docker, Kubernetes, FastAPI, Flask, Model Monitoring (MLflow, TensorBoard)
Big Data & Cloud: Google Cloud Platform (GCP), AWS, Apache Spark, Hadoop, Apache Kafka
Spreadsheets: MS Excel, Google Sheets

EXPERIENCE

Heuristics Pharma Perception   **January 2025 – Present**
Data Analyst   **New York, NY**
• Engineered a model-serving infrastructure using Kubernetes and FastAPI, reducing model inference time by 30%, ensuring real-time predictions for high-volume analytical requests in business intelligence workflows.
• Developed an embeddings-based similarity model using FAISS and OpenAI embeddings, enhancing information retrieval accuracy by 15%, leading to faster access to relevant data for internal research teams.
• Built and fine-tuned NLP pipelines leveraging BERT models for automated entity recognition, increasing classification precision by 18%, enabling reliable categorization of unstructured datasets for regulatory analysis.
• Integrated a high-speed vector search pipeline with Neo4j and Elasticsearch, reducing data retrieval latency by 22%, allowing business users to query structured & unstructured data in under 2 seconds.
• Automated model monitoring and retraining workflows using MLflow & Prefect, reducing model drift by 19%, ensuring consistent model performance and reliability across evolving datasets.
• Orchestrated ETL workflows for unstructured data processing using Apache Airflow, automating data ingestion from APIs and internal sources, reducing manual processing efforts by 30%, and improving pipeline efficiency.

Sriroz Consultants Private Limited   **November 2021 – July 2023**
Business Analyst   **Pune, India**
• Redesigned SQL-based sales reports to integrate real-time customer purchase behavior analysis, reducing data processing delays by 30%, allowing executives to react to market shifts in real-time.
• Performed exploratory data analysis (EDA) on customer retention patterns, identifying seasonal churn spikes, enabling the design of retention campaigns that decreased voluntary churn by 12%, preventing $40K in lost revenue.
• Developed interactive Power BI dashboards that automated sales reporting for regional managers, reducing manual reporting workload by 30% and improving sales forecasting accuracy by 25%, driving $86K in optimized marketing budget allocation.
• Integrated Python-based CRM automation to track lead-to-conversion journeys, allowing sales teams to prioritize high-value leads, increasing conversion rates by 20%, contributing $105K in additional revenue.
• Conducted competitive pricing analysis using web-scraped competitor data, identifying underpriced product categories, increasing profit margins by 12%, resulting in $180K in additional annual revenue.
• Implemented customer segmentation models to refine marketing strategies, increasing repeat purchase rates by 22%, leading to $126K in long-term customer value growth.

ACADEMIC PROJECTS

AI-Powered Patient Risk Prediction System   **January 2025 – March 2025**
- Developed a machine learning model for early patient readmission risk detection, The XGBoost & Random Forest model achieved 90% precision, allowing hospitals to prioritize high-risk patients and reduce readmissions by 22%.
- Automated patient data ingestion using Apache Airflow, streamlining data collection from Electronic Health Records (EHRs) and wearable health devices, reducing manual data handling by 25% and ensuring near real-time patient monitoring.
- Implemented real-time patient monitoring with Kafka & Apache Spark Streaming, reducing response time for clinical intervention by detecting abnormal health patterns in real time, allowing medical staff to take proactive action before escalation.
- Designed NLP-driven insights using BERT models, extracting critical patient risk indicators from unstructured physician notes, increasing diagnostic efficiency by 27% and improving risk stratification models.
- Deployed the risk model in a HIPAA-compliant cloud infrastructure (AWS & Kubernetes), ensuring secure, scalable, and compliant handling of sensitive patient data while reducing compute costs by 18% through efficient resource allocation.

Emotional Chatbot for Multimodal Emotion Recognition   **December 2024**
- Developed a multimodal chatbot integrating text-based Natural Language Processing (NLP) and voice analysis, achieving 90% accuracy in emotion detection through Random Forest and CNN models.
- Enhanced user engagement by creating a personalized recommendation engine leveraging APIs like Spotify, YouTube, and Eventbrite for emotion-based suggestions such as music, videos, and events.
- Evaluated model performance using cross-validation, achieving a F1-score of 0.88 in emotion classification.
- Preprocessed text and audio data using advanced techniques and applied data augmentation to improve model robustness and performance.
- Built a Flask-based web interface supporting real-time interaction, delivering applications in healthcare, education, and customer support with use cases like mental health monitoring and adaptive learning systems.

CERTIFICATIONS

Learning SnowflakeDB, Microsoft Project for the Web: Reporting with Power BI, MySQL Data Analysis, BCG - Data Science Job Simulation, Goldman Sachs - Software Engineering Job Simulation, Quantium - Data Analytics Job Simulation, R for Data Science: Analysis and Visualization, Excel Skills for Business: Intermediate I & 2

EDUCATION

- **Pace University, Seidenberg School of Computer Science, and Information Systems**   **New York**
  MS in Information Systems | **Concentration**: Information Systems| **Honors:** Masters   **2025**

- **Savitribai Phule Pune University, Modern Institute of Business Studies**   **Pune, India**
  Master of Business Administration | **Concentration**: Business Analytics| **Honors:** Masters   **2022**

- **Savitribai Phule Pune University, Dr. D. Y. Patil College of Arts, Commerce and Science**   **Pune, India**
  Bachelor of Business Administration | **Concentration**: Human Resource Management| **Honors:** Bachelors   **2020**