Nikhil Vinod

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CAREER SUMMARY

Highly motivated and results-oriented data science graduate with practical experience in data analysis, machine learning, and visualization. Proficient in Python (Pandas, NumPy, Scikit-learn), SQL, and statistical techniques, including supervised and unsupervised learning methods. Proven ability to translate complex data into actionable insights, demonstrated through successful project completion and technical blogging. Seeking an entry-level data scientist position to leverage my skills and contribute to a dynamic team

KEY SKILLS

- Programming Languages: Python (Pandas, NumPy, Scikit-learn), SQL,Spark
- Data Engineering & ETL: Data Cleaning, Pre-processing, Data Warehousing, Feature Engineering
- Machine Learning Deep Learning: Supervised learning (Linear Regression, Logistic Regression, Decision Tree, KNN, Ensemble Methods); Unsupervised learning (KMeans, Agglomerative Clustering, PCA) , TensorFlow (Keras), Generative AI
- Business Intelligence & Visualization: Matplotlib, Seaborn, Plotly Express
- SQL Optimization & Query Performance: Complex SQL queries, Joins, Window Functions
- Data Analysis & Statistical Modelling: Trend Identification, Predictive Modelling, Hypothesis Testing
- Databases: SQL (HackerRank certified)
- Tools & Platforms: Jupyter Notebook, MS Excel, Google Sheets

ACADEMIC – DATA SCIENCE PROJECTS

Empowering Early Detection of Heart Attack Risks with Machine Learning

- **Approach**: Leveraged classification models such as Logistic Regression and XGBoost to predict heart attack risks. Performed data pre-processing, feature engineering, and model evaluation to ensure high prediction accuracy.
- **Insights**: Identified key risk factors influencing heart attack chances, such as age, smoking status, Diabetes, etc.
- **Value Addition**: The project offers a predictive tool for early medical intervention, potentially saving lives and reducing healthcare costs through timely detection.
- Tools Used: *Python (Pandas, NumPy, Scikit-learn), Matplotlib, Seaborn*

Stock Price Prediction Using LSTM with Attention Mechanism

- **Approach**: Developed a deep learning model using LSTM with Attention to predict stock prices, leveraging historical trends and technical indicators. The approach involved feature scaling, sequence modeling, and hyperparameter tuning to optimize predictive performance.
- **Insights**: Key insights included the impact of moving averages and sequence length on accuracy.
- **Value Addition**: This project showcases time series forecasting, deep learning implementation, and financial data analysis, providing valuable insights for investment decision-making.
- Tools Used: *Python (Scikit-learn, Matplotlib, Seaborn), TensorFlow/Keras*

Prioritizing Development Needs: A Socio-Economic Analysis of Nations

- **Approach**: Used Principal Component Analysis (PCA) for dimensionality reduction and KMeans clustering to group countries based on socio-economic and health factors.
- **Insights**: Highlighted countries most in need of aid, based on a combination of healthcare, economic stability, and education metrics.
- **Value Addition**: The analysis provided actionable insights for strategic aid allocation, helping organizations like HELP International target resources effectively.
- Tools Used: *Python (Pandas, NumPy, Scikit-learn), Seaborn, Matplotlib*

AI-Powered Movie Recommender System

- **Approach**: Developed a Movie Recommender System using Google Gemini AI, leveraging user preferences, genre-based filtering, and AI-driven recommendations to enhance movie discovery. Implemented the system using Streamlit, LangChain, and Gemini API for an interactive user experience.
- **Insights**: Analysed movie selection patterns and optimized recommendation accuracy by refining filtering mechanisms. Enhanced user engagement by incorporating customized suggestions based on mood and genre preferences.
- **Value Addition**: Simplifies the movie selection process by providing personalized and data-driven recommendations, improving user experience. Demonstrates expertise in AI-driven applications, API integration, and interactive web development.
- Tools Used: *Python (Scikit-learn,langchain,googe-generativeai), Gemini API, Streamlit*

IPL Data Analysis for 2024 Special Edition Magazine

- **Approach**: Conducted a comprehensive analysis of IPL data from 2021 to 2023 using SQL, focusing on player performance, team strategies, and season-specific trends. The analysis included identifying top-performing players, evaluating team success rates, and uncovering patterns in boundary and dot ball effectiveness.
- **Insights**: Identified leading players in batting and bowling based on performance metrics (runs, wickets, strike rates, economy rates). Analysed team strategies to determine the success rates in match outcomes and chasing targets.
- **Value Addition**: Delivered data-driven insights for a special IPL 2024 magazine, providing value to fans, analysts, and teams. This project honed my SQL and data analysis skills, demonstrating the value of data-driven insights in sports performance evaluation.
- Tools Used: *SQL, Data Analysis*

Image-to-Text System using Gemini

- **Approach**: Built an AI-powered system using Streamlit and Google Gemini API to analyze images and generate intelligent text responses based on user prompts.
- **Insights**: Enabled context-aware image analysis, supporting object detection, scene description, and OCR with improved accuracy through AI-driven processing.
- **Value Addition**: Enhanced image-to-text automation with a customizable, interactive interface, making it useful for research, accessibility, and content generation.
- Tools Used: *Python, Streamlit, Google Gemini API, LangChain, Pillow, python-dotenv.*

HACKATHONS/OTHER CERTIFICATIONS

SQL skill certification – HackerRank

Python Skill Certification – HackerRank

Education

Post Graduate Programme in Data Science and Engineering 2025

- Institution: Great Lakes Institute of Management

Bachelor of Commerce in Finance 2024

- Institution: Calicut University
- CGPA: 8.1/10

12th Std 2021

- Institution: Govt. Boys Higher Secondary School Manjeri
- CGPA: 98/100

10th Std 2019

- Institution: Govt. Boys Higher Secondary School Manjeri
- CGPA: 90/100

OTHER ACHIEVEMENTS

Technical Blogging: Authored blogs on various data science concepts (Linear Regression, Bagging vs. Boosting, etc.).

Academic Excellence: 98% in 12th Grade, 82% in undergraduate studies.