Samhit Prakash Nayak

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Summary

Motivated Master of Computer Applications student with a strong foundation in machine learning and MLOps. Proven ability to build end-to-end data science and MLOps projects, from data analysis with Pandas to model containerization with Docker. Recently completed a Microsoft co-branded internship in the Foundations of AI, where he gained a solid understanding of core concepts like supervised learning, Generative AI, and Computer Vision.

Education

Master of Computer Applications | BMS Institute of Technology and Management, Bengaluru **[CGPA: 8.95]**

Skills

- **Programming Languages**: Java, Python
- **Data Science & ML**: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, NLTK, EDA, Feature Engineering
- **MLOps & Deployment**: FastAPI, Docker, Git, GitHub
- **Core Concepts**: Data Structures & Algorithms (DSA), Database Management Systems (DBMS)
- **Tools**: Jupyter Notebook, VS Code

Projects

End-to-End House Price Predictor | GitHub |

- Developed a regression model to accurately predict housing prices, comparing Linear Regression and Random Forest models.
- Achieved a superior R-squared score of 0.7144 with the Random Forest Regressor.
- Utilized Python, Pandas, NumPy, Scikit-learn, and Matplotlib for data manipulation, analysis, and visualization.

Kindle Reviews Sentiment Analysis | GitHub |

- Engineered an NLP model to classify thousands of customer reviews as positive or negative.
- Performed data cleaning and used TF-IDF vectorization to prepare the text data for machine learning.
- Visualized sentiment distribution to identify key phrases and sentiment trends in the dataset.

MLOps Project: Hate Speech Detection API | GitHub |

- Built a complete MLOps pipeline for a hate speech detection API using FastAPI and Docker.
- Addressed class imbalance with SMOTE, improving the recall on the minority hate speech class from 17% to 54%.
- Containerized the entire application, including the trained model and vectorizer, for deployment and portability.

Professional Experience

Foundations of Artificial Intelligence Intern | Edunet Foundation in collaboration with Microsoft

- Completed an intensive 4-week program on core AI/ML concepts and their real-world applications.
- Gained a solid understanding of supervised learning, Generative AI, and Computer Vision using Azure demos.
- Developed a project from a real-world problem statement under the guidance of an industry mentor.

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- Java with Data Structures and Algorithms | Apna College