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 I 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: 9.20]

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

Drug Legitimacy Verification Using Machine Learning and Blockchain | GitHub |

- Developed a multi-modal system to detect counterfeit pharmaceuticals using Machine Learning, Deep Learning, and Blockchain technology.
- Engineered a Random Forest classifier to analyze structured drug metadata and a CNN with an Autoencoder for visual verification of packaging, ensuring a dual-layered authentication process.
- Implemented a tamper-proof verification ledger using Ethereum smart contract on a Ganache test network, with QR code integration for real-time validation by end users.

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