MADESH M
AI/ML ENGINEER

📞 +91 6374891755   🌐 https://madesh6554-portfolio.my.canva.site/   ✉ madesh6554@gmail.com

🐙 madesh6554(Madesh M)   in linkedin.com/in/madesh-m-15037b273   k madesh6554

SUMMARY

Aspiring AI/ML Engineer with strong academic foundation in Data Science (M.Sc.), hands-on experience in Machine Learning, Deep Learning, and Computer Vision, and a passion for solving real-world problems using AI technologies. Proven ability to build and deploy end-to-end ML pipelines, from data preprocessing to model deployment.

SKILLS

Core Domains:
- Machine Learning
- Deep Learning
- Computer Vision
- Natural Language Processing
- Data Visualization
- Database Management

Language & Tools:
- Python
- SQL
- R
- Excel
- Tableau
- Power BI
- Git/GitHub

Working Platforms:
- Anaconda
- Jupyter Notebook
- Spyder
- PyCharm
- Google Colab
- Visual Studio

Data Handling Expertise:
- Data Annotation
- Data Preprocessing
- Data Cleaning
- Exploratory Data Analysis(EDA)

INTERNSHIP EXPERIENCE

Data Science & AI R&D Intern - Space Kidz India   **Jan 2025 - May 2025**
- Spearheaded the development of AI ModelHub, a unified interface integrating 10+ pre-trained models spanning NLP, Computer Vision, Audio, and Generative AI domains.
- Designed Gemini Analyzer (visual-text analysis tool) and Sign Translate (Sign Language-to-Text converter), working with text, image, audio, and video data — aligned with multimodal AI workflows.
- Coordinated across modules and datasets to ensure data consistency, annotation quality, and smooth deployment.

Skills Used: Python, Flask, Multimodal Data Processing, Communication, Model Integration, Team Collaboration

Smart Electronics Recommendation Intern– Boston Training Academy   **Dec 2024- Apr 2025**
- Built a real-time product recommendation system using FuzzyWuzzy and content-based filtering, achieving over 90% match accuracy for electronics like phones and laptops.
- Collected and cleaned product data, implemented string similarity logic, and deployed the solution using Streamlit Cloud with a responsive user interface.
- Demonstrated full-stack capability in data preprocessing, ML logic, and front-end deployment for real-time search and recommendation.

Skills Used: Tableau, Power BI, Python, Data Cleaning, EDA, Data Storytelling, Visual Analytics.

Data Science Intern - OASIS Infobyte   **Oct 2023 - Nov 2023**
- Created a spam email classification model using TF-IDF vectorization and Logistic Regression, achieving 96% accuracy.
- Applied text annotation, preprocessing, and model evaluation techniques to improve NLP model performance.

Skills Used: Python, Scikit-learn, TF-IDF, NLP, Logistic Regression, Data Annotation, Evaluation

PROJECTS:

Satellite Health Monitoring System

- Developed and deployed a real-time anomaly detection system monitoring 40+ satellite parameters, resulting in 100% alert accuracy and reducing failure risk by early detection up to 80% faster than manual tracking.
- Trained an Isolation Forest algorithm to detect anomalies, integrated real-time email alerts, and visualized live data using a Streamlit dashboard.
- Managed structured data in MySQL and utilized AWS S3 for scalable remote storage.
- Live Demo:https://satellite-health-monitoring-dt-bom4jaf2gnukue8yizjeak.streamlit.app

Skills: Python, Machine Learning, Anomaly Detection, Isolation Forest, MySQL, AWS S3, Streamlit, Email Automation, Data Preprocessing, Data Engineering

Image Caption Generator

- Built and deployed an AI-powered image captioning tool using VGG16 + LSTM, achieving over 85% BLEU score on test data and successfully generating accurate captions for 90% of real-world images uploaded.
- Trained and validated the model using the Flickr8k dataset, comprising 8,000 images each with multiple human-written captions.
- Improved the front-end interface to allow users to upload images and receive an AI-generated descriptive caption.
- Applied transfer learning, tokenization, and sequence padding for robust caption generation.

Skills: TensorFlow, Keras, VGG16, LSTM, NLP, Computer Vision, Image Annotation, Transfer Learning, Sequence Modeling

AI ModelHub (Team Lead)

- Led the design and development of AI ModelHub, a unified platform integrating 10+ pre-trained models across NLP, Computer Vision, Audio Processing, and Generative AI tasks.
- Developed core multimodal tools like Gemini Analyzer (visual-text analysis) and Sign Translate (sign language to text converter), addressing accessibility and multimodal data use cases.
- Built the application using Flask (backend) and Streamlit (frontend), ensuring smooth user interaction, modular integration, and clear visualization of model outputs.
- Managed end-to-end deployment on Render, coordinated with team members on GitHub, and ensured model inference efficiency across all modules.

Skills: Python, Flask, Streamlit, Hugging Face Transformers, OpenCV, Multimodal AI (NLP, CV, Audio), Git, GitHub, Render, Team Collaboration, Model Deployment, REST APIs

Email Spam Detection

- Built an NLP model using TF-IDF and Logistic Regression that achieved 96% classification accuracy on real-world spam datasets, improving detection performance by 15% compared to baseline models.
- Achieved 96% accuracy on test data, showcasing efficient handling of textual datasets.

Skills: Scikit-learn, TF-IDF, Text Preprocessing, NLP, Classification, Accuracy Evaluation