

MADESH M

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SUMMARY

Analytical and results-driven data professional with hands-on experience in data analysis, artificial intelligence, and machine learning. Proficient in Python, SQL, and Excel, with a track record of building predictive models and AI-driven solutions. Skilled at translating complex data into actionable insights to support strategic business decisions. Passionate about applying intelligent automation to solve real-world problems across diverse domains.

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

Working Platforms:

- Anaconda
- Jupyter Notebook
- spyder
- PyCharm
- Google Colab
- Visual Studio

Data Handling Expertise:

- Data Annotation
- Data Preprocessing
- Data Cleaning
- Exploratory Data Analysis (EDA)

WORK 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

Data Visualization Intern - Cognitive i IT Solutions, Salem

Mar 2024- Jul 2024

- Built dynamic dashboards using Tableau and Power BI for domains including climate analysis, retail performance, and entertainment trends.
- Conducted thorough data cleaning, annotation support, and exploratory data analysis (EDA) to identify actionable insights.
- Specialized in transforming complex datasets into visual narratives for non-technical stakeholders.

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.
- Hands-on with classification problems, data validation, and error analysis, similar to annotation refinement tasks at Amazon.

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

EDUCATION

Master's Degree in Data Science - 2023 - 2025
Periyar University.
CGPA: 7.95
Bachelor's Degree in Mathematics - 2020- 2023
Arignar Anna Government Arts College
CGPA: 7.93

Language: Tamil & English

CERTIFICATES

- Nlp- Coursera
- Fundamentals of Deep Learning - NVIDIA
- Python for Data Science, AI & Development - IBM / Coursera
- Tableau - Simple Learn
- SQL for Data Science - Coursera

PROJECT:

■ 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: [satellite-health-monitoring](#)

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 a front-end interface where users can upload any image 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

■ 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

■ Smart Electronics Recommendation System - Boston Training Academy Internship

- Designed and deployed a smart recommendation system with 90%+ match accuracy using content-based logic and fuzzy string matching, enabling real-time suggestions with <1 second response time on live deployment.
- Applied web scraping to collect product data and used FuzzyWuzzy for string similarity to improve product match accuracy.
- Built and deployed an interactive front-end using Streamlit on Streamlit Cloud for real-time product suggestions.
- Skills: Python, Machine Learning, Web Scraping, Fuzzy Matching, Recommendation Systems, Streamlit