Paresh Makwana

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EXPERIENCE

PentaShield Technologies, Vadodara — *System Analyst*

Feb 2022 - PRESENT

- Spearheaded the development of a sophisticated automated pipeline for transforming raw data into structured formats, showcasing expertise in data preprocessing, a fundamental skill for deriving insights from complex documents.
- Developed an AI-powered Video Management System, demonstrating proficiency in AI-driven analytics and sensor data visualization—an integral aspect for unlocking meaningful patterns and trends.
- Seamlessly integrated diverse analytical models, including machine learning and statistical approaches, enhancing decision-making processes—a core responsibility for professionals focusing on predictive modeling.
- Applied specialized skills to analyze high-dimensional flight parameters data, demonstrating versatility in handling various data types and showcasing expertise in complex data analysis—an essential skill for professionals dealing with diverse datasets.

Cognizant, Remote — *Internship*

April 2022 - June 2022

Excelled in SQL for complex database operations, including valuable data extraction, while actively contributing to Python-based projects to enhance data handling and analysis.

EduFeat, Remote — *Subject Matter Expert*

August 2021 - PRESENT

Demonstrated expertise in Core Subjects, providing invaluable assistance to students by resolving doubts and fostering a conducive learning environment through effective communication, responsiveness, and reliable support.

Electrotherm Solar Limited, Remote — *Research Intern*

May 2021 - August 2021

Engineered a Pneumatic System for Ventilators, integrating EPR technology, microcontrollers, and motor drivers for precise pressure control and reliability.

EDUCATION

Institute Of Infrastructure Technology Research and Management (IITRAM), Ahmedabad — *Bachelors*

2018-2022 - Electrical Engineering - Ahmedabad

SKILLS

Languages: Python, MATLAB, C/C++, SQL, R,

Technologies: AWS, Machine Learning, Deep Learning, Data Science, Data Analytics, Pandas, Scikit-learn, PySpark, Tableau, Web Development, Version Control, Web Scraping, GUI Development

Tools: PyCharm, Docker, Git, GitLab, Anaconda, Amazon SageMaker, Google BigQuery, Unreal Engine, Microsoft Office

Soft Skills: Time Management, Problem Solving, Teamwork, Technical Documentation

Achievements

Badge: Data Analytics, Data Science Orientation

5 Star Gold Badge: Python

3 Star Silver Badge: C++

LANGUAGES

English, Hindi , Gujarati

AI-Enhanced Video Management System

- Led the development of an AI-driven Video Management System, integrating Spotter Scope, thermal scope, and various electro-optical sensors for real-time data analysis, object recognition, and anomaly detection.
- Implemented a lightweight Flask server to ensure efficient data exchange between frontend and backend, enabling seamless data ingestion and distribution. Designed and managed robust database systems for secure data storage, retrieval, and historical analysis.
- Developed customized AI solutions, leveraging machine learning models to enhance system accuracy and create a user-friendly dashboard for intuitive data visualization, supporting data-driven decision-making across geospatial and situational domains.

Intelligent Document Processing

- Proficiently employed Python and PaddlePaddle frameworks to implement advanced layout parsing algorithms, enabling structured data extraction from diverse document formats with a focus on precision and recall optimization.
- Seamlessly integrated processed data with relational databases, ensuring secure storage, retrieval, and efficient querying, while also utilizing Geographic Information Systems (GIS) for geospatial data visualization, fostering data-driven decision-making in spatially oriented domains.

Publications

A novel automated robust dual-channel EEG-based sleep scoring system using optimal half-band pair linear-phase biorthogonal wavelet filter bank

Manish Sharma, Paresh Makwana, Rajesh Singh Chad, U Rajendra Acharya

Applied Intelligence(2023) pp. 1–19. Springer, 2023

Certifications

Data Analytics - Google

Foundations: Data, Data, Everywhere, Ask Questions to Make Data-Driven Decisions, Prepare Data for Exploration, Process Data from Dirty to Clean, Analyze Data to Answer Questions, Share Data Through the Art of Visualization, Data Analysis with R Programming, Google Data Analytics Capstone: Compete Case Study.

Data Science

Exploratory Data Analysis with MATLAB (MathWorks), Data Processing and Feature Engineering with MATLAB (MathWorks).

Others

Hands-on Machine Learning with AWS and NVIDIA, Introduction to AI in Data Center, Crash Course on Python, Introduction to the Internet of Things and Embedded Systems, Signal Processing Onramp, Simulink Onramp, Matlab Onramp.

Position Of Responsibilities

- Executive Coordinator and Representative of NFSU at **DefExpo-22.**
- STEM Bootcamp Coordinator with **GUJCOST** and **Bharat Shodh Sansthan**.