UDHAYAKUMAR

AI & DATA SCIENTIST

CONTACT

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- Github

SKILLS

- EDA Data Processing
- Deployment, Data Visualization
- python Library-Numpy, Pandas,
- Matplotlib, Seaborn, Keras,
- Tensor flow
- OpenCv
  Machine Learning
  Deep Learning
- Time series Analysis
- Natural Language processing
- SQL
- PowerBI
  LLM (Large Language Model)
- Generative AI
- Asset Management
- AUTO CAD PRO-E
- Mechanical materials
- vender Management
- AI Agent
- specialised rag based AI Agents

PROFILE

Experienced professional with 10+ years in mechanical operations specializing in maintenance coordination, documentation, and resource management. Recently upskilled in AI and Data Science, with expertise in data analysis, visualization, and machine learning. Known for improving efficiency, ensuring safety, and delivering projects on time. Ready to combine mechanical expertise and AI skills to drive innovation and business success.

WORK EXPERIENCE

Documentation Executive & Maintenance Coordinator/Planner

CREW Pvt Ltd,Chennai   2014- 2025

Key Responsibilities:

- Developed dashboards and reports to **track performance and key metrics**, ensuring actionable insights for process improvement. Applied **Machine Learning techniques** to predict
- trends, optimize operations, and enhance resource planning. Automated data processes such as **data collection, cleaning**,
- and analysis to **save time and improve efficiency**. Implemented **AI**-driven solutions to improve maintenance
- planning, streamline workflows, and enhance **safety compliance**.
- Identified **task activities** by assigning work centers and ensuring the availability of **materials, tools, and equipment**.
- Maintained routine management records and ensured the **smooth flow of daily operations**.
- **Monitored and controlled** maintenance activities, including preventive, scheduled, breakdown, and shutdown tasks.
- Ensured **effective resource utilization** through close tracking of maintenance schedules and operations.
- Collaborated on **AI-based projects**, including data integration, model development, and dashboard creation, to support **business goals**.

LANGUAGES

- English
- Tamil

SOFT SKILLS

- Maintenance planning and coordination
- Collaboration and Teamwork
- Material management and procurement
- Safety protocols and regulations
- Data analysis and reporting (Looker Studio)
- MS Word and documentation management
- Time management and organization
- Leadership and Initiative
- Technical support
- Communication Skills

CERTIFICATION

- Completed the complete **AI & Data Science course on Hope Artificial Intelligence Pvt Ltd,** Coimbatore

- Participation Certificate of Real Time Project Dashboard using **Looker Studio by HopeAI**

EDUCATION

B.E. MECHANICAL ENGINEERING
2011 - 2014
ARASU ENGINEERING COLLEGE, KUMBAKONAM
CGPA 7.6

DIPLOMA MECHANICAL ENGINEERING   2007- 2010
SSP GOV POLYTECHNIC COLLEGE
74.79 %

PROJECTS

1. Rag-Based Q&A System for Resume Analysis using Generative AI, ChromaDB VectorDatabase

Project Overview:

Designedandimplemented a RAG-based Q&A system to analyze resumes and extract key information in a concise Q&A format. Leveraged Generative AI and ChromaDB Vector Database for efficient storage and retrieval. The system was developed in Google Colab and achieved high accuracy in extracting relevant details from resume datasets.

Technologies & Tools Used:

- NaturalLanguageProcessing(NLP), Python programming , Generate AI

Key Responsibilities :

- Designedand implemented a RAG-based Q&A system for extracting key information from resumes using Generative AI.
- Integrated ChromaDB for efficient storage and retrieval of resume embeddings, enhancing system performance.
- Utilized Python and NLP libraries in Google Colab for model development, testing, and evaluation.
- Trained and evaluated the system on a resume dataset, ensuring accurate information retrieval and high performance.

2. Object detection using SSD MobileNet- Deep learning

Project overview

Developedan ObjectDetection system using the SSD MobileNet model to identify and localize tools, and equipment in real-time video streams. Utilized TensorFlow, OpenCV, and Python for training, deployment, and image processing. Demonstrated expertise in deep learning and computer vision for accurate detection and localization.

Technologies & Tools Used:

- SSD,MobileNet,TensorFlow,OpenCV, Python, NumPy

Key Responsibilities :

- Thisobjectdetection system makes it easy to identify moving or shuffled objects quickly, saving time and effort.
- Developed an object detection system for real-time identification and localization of objects in live video streams with high accuracy.
- Optimized video frame processing to display real-time outputs, including object labels and detection confidence scores.
- Ensured accuracy and reliability through continuous testing and fine-tuning of the detection process.

3. Dashboard Creation using Looker Studio for HopeAI Website Real-Time Dataset

Project overview

Developed adashboard using Looker Studio and real-time data from the HopeAI website to analyze customer behavior and target audiences. Used data analysis and visual storytelling to improve marketing strategies and user engagement. Integrated advanced Looker Studio features for clear, actionable insights and data-driven decision-making.

Technologies & Tools Used:

- Looker Studio

Key Responsibilities :

- Developeda comprehensive Dashboard using Looker Studio and real-time HopeAI website data for actionable insights.
- Conducted data analysis, visualization, and storytelling to drive informed decisions and enhance marketing strategies.
- Designed and implemented data integration solutions to provide clear, insightful reporting.
- Utilized dashboard design expertise to analyze customer channels, geographies, and target audiences effectively.