ARUN PRASATH S
AI-Driven Innovator

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Education

SNS College of Engineering	**Coimbatore**
Bachelor of Technology - Artificial Intelligence and Data Science ; CGPA - 9/10 (Till 6th Sem)	Nov 2022 - Present

Sri Krishna CBSE & Matriculation Higher Secondary School	**Dindigul**
SSLC - 90% & HSC - 85%	Jun 2019 - May 2022

Skills Summary

Languages : Python, R

Frameworks : Pandas, Numpy, Scikit-learn, TensorFlow, NLTK

Tools : Tableau, MySQL, Jupyter Notebook

Platforms : Raspberry Pi, Google Colab

Soft Skills : Leadership, Event Management

Experience

ZF Wind Power Coimbatore Private Limited — **Coimbatore**

Machine Learning Engineer — Jul 2024 - Aug 2024

Project 1 - Concentration Drop Analysis
- Analyzed 4 years of data to predict and manage concentration drops in manufacturing using a Weighted Average algorithm.
- Utilized NumPy, Pandas, and a real-time tracking interface to optimize production efficiency.

Project 2 - Forecasting Machine Failures
- Developed an LSTM predictive model using TensorFlow, NumPy, and Pandas to forecast machine defects.
- Implemented a solution for proactive maintenance, reducing downtime by anticipating defect occurrences.

IMAI Technologies — **Coimbatore**

AI Research Intern — Jun 2024 - Jul 2024

Project - Object Detection and Classification
- Developed a YOLO-based object detection model in Python using OpenCV and TensorFlow Lite to classify vehicles as two-wheelers or four-wheelers.
- Deployed the optimized model on Raspberry Pi with a live camera feed, enabling real-time vehicle detection even in a low luminous environment

Projects

Data-Driven Quality Control
- Implemented machine learning techniques for quality control in manufacturing.
- Leveraged predictive models to detect defects in metal parts using real-time data, enhancing production reliability and minimizing waste.

Extracting and Summarizing PDF Data
- Developed a Python script using PyPDF2 and NLP libraries to extract text from PDF files.
- Summarized paragraphs into single lines and generated keyword descriptions for efficient data management.

Basic Speech Recognition
- Created a speech recognition tool using Python and Speech Recognition library.
- Processed audio data to recognize and transcribe spoken words, enabling seamless interaction with applications.

Certifications

- **Data Structure** - Great Learning
- **Google Analytics** - Coursera
- **Azure AI Fundamentals** - Microsoft
- **NPTEL** - Industry 4.0 and Internet of Things

Volunteer Experience

Tech Lead – Generative AI Project
- Guided seniors and successfully helped to complete 2 projects in Generative AI.

Event Organizer
- Organized and managed the farewell event for seniors.