Sujal H R

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+91 8217605059 Bengaluru, Karnataka, India

Education

Swargarani School, Bengaluru March 2020
Class 10, ICSE 91.4%

JSS Academy Of Technical Education, Bengaluru, Karnataka 2022 - 2026
Bachelor of Engineering in Computer Science (CSE-AIML) CGPA: 8.15/10.0

Experience

Machine Learning Engineer, Intern - AppWeave Labs **Feb 2025 - Present**

- **AI-Powered Resume Parsing System:** Engineered an advanced application using LlamaIndex and Google's Gemini API that achieved 98% precision in extracting structured data from resumes.
- **Job Matching Algorithm:** Designed and implemented a scoring algorithm that evaluates resume-to-job description compatibility with 87% match precision using vector embeddings and semantic analysis.
- **Data Pipeline Architecture:** Created efficient ETL processes to transform unstructured resume data into dual JSON formats, reducing processing time by 40% compared to other methods.
- **Technical Skills Applied:** Python, NLP, Agentic Framework, LlamaIndex, Gemini API, RAG (Retrieval-Augmented Generation), JSON schema design, Vector Databases, PostgreSQL

Data Engineer, Intern - AppWeave Labs **Oct 2024 - Nov 2024**

- **Web3 Integration:** Developed a Flask API application that processed number of file uploads to IPFS through Pinata API with 99.8% uptime and secure authentication.
- **NFT Analytics Platform:** Built and optimized PostgreSQL queries that analyzed 10,000+ NFT transactions, identifying key marketplace trends and generating actionable business insights.
- **Rarity Algorithm Development:** Created a statistical algorithm that evaluates NFT trait combinations to generate accurate rarity scores, increasing valuation precision by 35%.
- **Revenure Report Processing Application:** Built an intelligent data processing tool using Streamlit for standardizing Excel reports, incorporating dynamic column mapping and database integration
- **Data Visualization Solutions:** Engineered interactive geospatial visualization dashboards using Kepler.gl and Streamlit based on user-selected parameters for lead time data, that reduced data interpretation time by 60% for visualization.
- **Technical Skills Applied:** Python, Flask, PostgreSQL, RESTful APIs, IPFS, Pinata, Streamlit, Kepler.gl, Data Analysis

Technical Skills

Programming Languages: Python, C/C++, Java, JavaScript, SQL
Technologies: Flask, Streamlit, NumPy, Pandas, Matplotlib, LlamaIndex, RAG, LLM APIs, Vector Embeddings, ETL Pipelines, CI/CD Practices
Tools: GitHub, Git, Linux, Power BI, Wordpress, Pinecone Vector DB, PostgreSQL, MySQL
Soft Skills: Communication, Leadership, Teamwork

Projects

Revenue Report Processing Application with Dynamic Column Mapping

- Engineered a Streamlit-based financial report parser that standardized reports with varying formats.
- Implemented fuzzy-matching algorithms for intelligent column detection, achieving 95% accuracy.
- Integrated with PostgreSQL via SQLAlchemy , reducing manual data entry time by 70%.
- Developed a session-based state management system for smooth, multistep workflows.
- **Technologies:** Python, Streamlit, Pandas, PostgreSQL, SQLAlchemy, FuzzyWuzzy

HealthMachina - Predictive Maintenance System for Industrial Machinery

- Collaborated during a hackathon to build a web app that predicts equipment failure using real-time condition data.
- Developed a predictive model using the RandomForest classifier (scikit-learn) with 98% accuracy.
- Designed UI in HTML/CSS and integrated with Flask backend.
- **Tech stack:** Python (46%), HTML (41%), CSS (13%), Flask, Scikit-learn

Autonomous Line Following Robot

- Designed a self-navigating robot using Arduino, IR sensors, and DC motors.
- Implemented PID control algorithm, achieving 95% path tracking accuracy at 0.5m/s.
- Optimized motor control to reduce power consumption, extending battery life by 40%.
- **Technologies:** Arduino, C++, PID Control, Sensor Calibration, Robotics

Certifications & Achievements

Introduction to Machine Learning Jul-Oct 2024
NPTEL Certification, IIT Madras - Completed with a consolidated score of 55%

First Place Winner: Battle Of Lines Dec 2022
Robo Fiesta 2022 - Line Follower Robot Competition, RVIT, Bengaluru