Sowmya M

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EXPERIENCE

Predigle India   **Chennai, Tamil Nadu**
Software Engineer – L2, Data Science (Primary)   *Apr 2025 – Present*

- Took ownership of modular pipeline components (LLM prompting, vector DB querying, OCR pre-processing) and drove them from design to production
- Collaborated with cross-functional teams (product, design, clinical SMEs) to translate business logic and Fabrix rules into scalable AI-powered automation tools
- Enhanced internal tooling and infrastructure for faster experimentation and safe deployment of GenAI workflows

Blenheim Chalcot   **Mumbai, Maharashtra**
Apprentice, Data Science   *June 2024 – Apr 2025*

- Collaborated on cross-functional tools, managing workflows from requirement to delivery across HR, L&D and Finance
- Designed and deployed automation flows for the CARA bot, enabling personalized career development guidance for 400+ employees
- Built low-code solutions to streamline hiring, pre-onboarding, and engagement, reducing manual effort and turnaround time

PROJECTS

Insurance Claim Application Automation | EsperCare   *May 2025 – June 2025*
Gemini 1.5 Flash, Milvus VectorDB, Sentence Transformer

- Designed and deployed a 3-stage pipeline to automate clinical enrollment form processing using OCR, RAG, and LLMs to reduce turnaround time, enabling faster treatment access
- Auto-filled complex forms by retrieving context from clinical documents using Milvus + Gemini RAG, achieving >80% automation accuracy
- Built a reconciliation layer to validate human vs. AI-extracted values, ensuring clinical safety and submission readiness (e.g., CoverMyMeds, FHIR)

Automated Cricket Data Capture and Data Extraction | Rajasthan Royals   *Feb 2025 – Apr 2025*
OpenCV, NumPy, YOLO, Matplotlib

- Implemented precise ball detection using Yolo11n, achieving 99.3% Precision and 98.3% Recall in tracking high speed ball movements across frames
- Developed a pitch segmentation model using Yolov8n-seg, achieving 99.9% Precision in segmenting pitch, enabling accurate localization of pitch areas
- Integrated perspective transformation and geometric reconstruction to identify and calculate metrices of key frames like ball release, bounce and impact

Employee Engagement Event Automation | Blenheim Chalcot   *Oct 2024 – Oct 2024*
LangChain, FastAPI, Power Automate

- Automated employee engagement by sourcing event data from BookMyShow using LangChain WebLoaders, extracting structured details via OpenAI
- Developed a FastAPI to serve curated event suggestions in JSON format based on relevance and user context
- Integrated with Power Automate to consume the API and deliver personalized, image-rich event recommendations via well-designed emails to employees

CERTIFICATIONS

- Complete Data Science and Machine Learning Program   *Dec 2023*
- Natural Language Processing Specialization by DeepLearning.AI   *Feb 2024*
- PL-900: Microsoft Power Platform Fundamentals   *Aug 2024*

SKILLS

Machine Learning	Python, Scikit-Learn, PyTorch, Tensor Flow, NLTK, Keras, Transformers
Data Tools	Pandas, NumPy, SQL, Matplotlib, Seaborn, Statistical Analysis
Computer Vision	OpenCV, Yolo, Geometrical Reconstruction, Perspective transformation
Generative AI	Langchain, LangGraph, MCP, Ollama, Azure AI, OpenAI, Gemini
Tools	Power Platforms, FastAPI, Git, MongoDB, SQL Server

EDUCATION

Lovely Professional University - *B.Tech. in Computer Science and Engineering (ML & DS)* **Jalandhar, Punjab**
CGPA: 8.25/10.00, *Dean's List* *July 2022 – June 2025*
Nachimuthu Polytechnic College - *Diploma in Electronics and Communication Engineering* **Pollachi, Tamil Nadu**
CGPA: 9.47/10.00, *First Class with Superlative Distinction* *July 2019 - April 2022*