

# Dhilip S

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## Experience

### Apprentice

October 2024 – Present

KGiSL

Coimbatore, India

- **Prediction Analysis and Classification Models:** Designed and deployed forecasting and classification models, improving prediction accuracy by 15% across business workflows.
- **Computer Vision Applications:** Built object detection and matching systems, automating visual recognition tasks and reducing manual review time by 40%.
- **Model Training and Fine-tuning:** Customized and fine-tuned pre-trained models for domain-specific datasets, boosting performance and precision for client solutions.
- **RAG and Agentic RAG Architectures:** Developed intelligent retrieval-augmented generation pipelines for context-aware query answering, improving response relevance.
- **Entity Recognition Systems:** Implemented NLP-based pipelines to extract structured entities from large-scale unstructured text datasets.
- **OCR for Document Intelligence:** Engineered OCR solutions for structured, unstructured, and handwritten documents, achieving up to 90% extraction accuracy and streamlining document processing.

## Education

### KGiSL Institute of Technology

2020 – 2024

B.E. Electronics and Communication Engineering (ECE)

CGPA: 7.92

## Projects

### Permit Management Portal

July 2025 – Present

KGiSL

Developer

- **Form Development:** Designed and implemented Permit, Extension, and Closure forms in Power Pages with role-based access for Users, Approvers, and Admins, reducing form creation time by 50%.
- **Process Automation:** Integrated Power Automate flows to trigger actions for data retrieval, submission, and updates in SharePoint lists, cutting manual intervention by 65%.
- **Data Management:** Configured SharePoint lists as the backend for storing permit requests, approvals, extensions, and closure details, ensuring **99% data consistency** across workflows.
- **User Experience:** Enabled pre-populated fields and automated workflows to reduce manual input, increasing submission accuracy by **80%** and reducing user effort by 40%.
- **End-to-End Workflow:** Established a complete lifecycle for permit requests—from creation to approval, extension, and closure—improving process transparency and traceability by 70%.

### Finance Agent - Agentic RAG Application

June 2025 – June 2025

KGiSL

Developer

- **Agentic RAG Development:** Built an AI-powered retrieval-augmented generation application using LangGraph, LM Studio, ChromaDB, and Streamlit for finance-related document querying, reducing manual lookup time by 70%.
- **Dynamic Vendor Table Selection:** Implemented logic to automatically select vendor-specific tables in ChromaDB based on vendor names extracted from user queries, improving query accuracy by **85%**.
- **Contextual Document Retrieval:** Developed intelligent filtering to retrieve only vendor-specific documents, achieving a **90% precision rate** in returned results.
- **No-Content Handling:** Integrated fallback mechanism to detect non-relevant queries and respond with “No content is found”, ensuring **100% system reliability** in ambiguous scenarios.
- **LLM Integration with LM Studio:** Connected the application to locally hosted LLMs via LM Studio, lowering external API costs by **100%** and improving response latency by 40%.
- **Streamlit-based Interactive UI:** Designed an intuitive interface enabling users to upload multiple vendor SOW files and interact seamlessly with the AI system, increasing user adoption by 60%.

- **Real-time AI Chatbot Development:** Created an AI-powered chatbot using GPT-4, integrating multiple APIs to enable dynamic responses, resulting in a 25% reduction in response time.
- **Multi-LLM Integration:** Enhanced query precision by 30% by combining LLMs such as Mistral and GPT-4 with diverse API services.
- **LangChain-powered Workflow:** Leveraged LangChain to streamline LLM application development, reducing development time and improving system performance.
- **Vector Database Implementation:** Deployed the AztraCore vector database to boost query understanding and retrieval efficiency.
- **Dynamic User Interface Design:** Built an interactive and responsive interface using HTML, CSS, JavaScript, and Flask to improve user experience.

## Technical Skills

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**Programming Languages:** Python, HTML, CSS, Javascript, SQL

**Technologies:** Machine Learning [Transformers, Torch], Artificial Intelligence (AI) [Generative AI, Agentic AI], Frameworks [LangChain, LangGraph, Haystack], Large Language Models (LLM) [Mistral, Llama, Deepseek], Natural Language Processing (NLP) [Text Classification (Technical and Non-Technical Classification), Sentiment Analysis (Positive and Negative Classification)], Retrieval-Augmented Generation (RAG), Flask, Firebase, Supabase, SQLite3, YOLO, Data Annotation, GitHub Models, MongoDB, PostgreSQL, SQL, Robotic Process Automation (RPA), Power Platform [Microsoft Power Pages, Microsoft Power Automate], Linux, Cloud Deployment [Google Cloud Platform (GCP)], Vector Databases [Chroma DB, PgVector, Mongo DB Atlas], Git, GitHub, Microsoft Office

**Tools:** Visual Studio Code, Python IDE, Google Colab, Kaggle, Roboflow, LabelImg, Hugging Face, LM Studio, Ollama, UiPath

## Achievements

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**Hackathon Participation:** Participated in Honeywell India Youth Teckathon - 2023 and HACK-A-BOT Hackathon - 2023.

**Winner in UiPath Skill-A-Thon:** Won the UiPath Citizen Developer SKILL-A-THON, 2022.

**Media Publications:** Published articles in leading newspapers like The Times of India on April 12, 2023, and The Hindu on March 21, 2023.

**Top 2 in Mixed Signal SoC Design Marathon:** Ranked Top 2 in Mixed Signal SoC Design Marathon Using eSim and SKY130, 2022.

**Top 4 in Mixed Signal Circuit Design:** Ranked Top 4 in Mixed Signal Circuit Design and Simulation Marathon Using eSim, 2022.

## Certifications

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**Agentic AI:** Earned dual certifications from Hugging Face's Agents Course, gaining hands-on expertise in agent fundamentals, frameworks, RAG integration, observability, and end-to-end deployment of autonomous AI systems.

**Artificial Intelligence (AI) and Machine Learning (ML):** Certified in ChatGPT for Everyone from Guvi, IBM AI Engineering, IBM AI Foundations for Business, Career Essentials in Generative AI by Microsoft and LinkedIn, AI for India 2.0 from Guvi.

**Programming and Development:** Certified in various programming languages and electronics courses through Coursera.

**Robotic Process Automation (RPA):** Certified in UiPath Community Certification Framework – Agentic Automation Associate and multiple UiPath specialization programs covering Agentic Automation, Autopilot, Maestro, and Test Cloud.

**Guinness World Record Participation:** Part of the Guinness World Record Event "AI for India 1.0" from Guvi.

## Languages Known

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**English:** Read/Speak/Write

**Tamil:** Read/Speak/Write