

KALPANA DEVI T

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SUMMARY

Enthusiastic Computer Science graduate with a strong interest in software development, data structures, and algorithms. Currently focused on expanding my knowledge through hands-on projects and continuous learning. Eager to apply my growing skills in a dynamic tech environment.

EDUCATION

B.E-Computer Science Engineering(2022- Present)

Jansons Institute of Technology,Coimbatore
CGPA - 7.7 (Upto 6th Sem)

HSC (2022) - 83%

SSLC(2020) - 92%

Scism.Mat.Hr.Sec.School,Bodinayakanur,Theni

CERTIFICATIONS

- Certification in programming languages C , C++ , Python
- Data analytics
- Artificial Intelligence
- Machine Learning

SKILLS

- **Programming Languages:** Python, C ,JavaScript,HTML,CSS
- **Tools & Platforms:** Git, GitHub, Swagger UI, VS Code
- **Backend & API Development:** FastAPI, RESTful APIs, API Integration, OAuth 2.0 Authentication, Token-Based Authorization, Background Task Processing
- **Databases & Storage:** Supabase, SQL (Basics), Data Modeling, Vector Indexing (FAISS)
- **Software Architecture & Concepts:** Modular Architecture, Scalable System Design, Configuration-Driven Development, Service-Oriented Design, Environment-Based Configuration
- **Libraries & Frameworks:** Pandas, NumPy, Scikit-learn, OpenCV, Keras,Puppeteer(JS)
- **Tools & Platforms:** Git, GitHub, Swagger UI, VS Code

WORK EXPERIENCE(INTERNSHIPS)

- **Currently working as Python and AI Developer intern** at BRANDINGBEEZ,Coimbatore
- Worked as business analyst intern in a project (Freeze drying machineries) at SAKTHI VEERA GREEN ENERGY PVT. LTD,Chennai
- Worked as IOT intern in IYARKAI TECH LAB PVT.LTD,Chennai
- Completed internship at NOVITECH R&D PVT.LTD in Data analytics
- Completed internship at NOVITECH R&D PVT.LTD in Artificial intelligence
- Completed internship at NOVITECH R&D PVT.LTD in Machine learning

ACHEIVEMENTS

- Participated in paper presentation in Karunya University and won 2nd prize
- Got selected in top 100 teams in national level idea presentation(Hack4purpose) held at Anna University,Chennai
- Participated in some technical events conducted in various colleges.

PROJECT EXPERIENCE

AI-Based Automated Web Analysis & Report Generation System(SEO- analysis)

- Designed and implemented an intelligent web analysis platform that automates dynamic website scraping, keyword extraction, contextual relevance filtering, and structured SEO report generation. Developed a modular backend service to process and transform unstructured web data into actionable insights using large language model integration, ensuring secure API communication, structured JSON workflows, and production-grade error handling aligned with organizational compliance standards.
- Technologies: Python, FastAPI, Node.js, Headless Browser Automation, REST APIs, JSON Processing, Asynchronous Programming, Version Control (Git).

Hybrid AI Chatbot with RAG Architecture

- Developed a production-ready AI chatbot using FastAPI, OpenAI APIs, and FAISS-based semantic retrieval, integrating Retrieval-Augmented Generation (RAG) for accurate, company-specific responses. Implemented intent classification, enquiry detection, and strict brand-tone enforcement with dynamic fallback via real-time web scraping. Designed a modular, scalable, configuration-driven architecture with vector indexing and structured service orchestration for deployment.
- Technologies: Python, FastAPI, OpenAI API, FAISS, RAG, LLMs, REST APIs, Web Scraping

AI-Powered Web Scraper & Article Summarizer

- Built an end-to-end Python application to scrape articles from news/blog websites, generate AI-based summaries, and store structured data in Supabase. Developed a simple HTML & CSS frontend to display article titles, summaries, published dates, and source links, and deployed the project with version control on GitHub.
- Technologies: Python, Web Scraping, AI/NLP, Supabase, HTML, CSS, GitHub

Gmail Automation System

- Gmail Automation System – Developed an automated email management system using the Gmail API with OAuth 2.0 authentication to securely access and process user mailboxes. Implemented token-based authorization, dynamic redirect URI handling, and automated parsing to identify and execute unsubscribe actions. Designed a scalable architecture supporting background job execution and API testing via Swagger UI.
- Technologies: Python, FastAPI, Gmail API, OAuth 2.0, REST APIs, Swagger UI, Background Tasks

Face Recognition System

- Implemented a face detection and recognition system using Haar Cascade Classifier in OpenCV, achieving real-time performance through optimized video frame analysis.
- Technologies: Python, OpenCV, Haar Cascade and Computer Vision.

Moving Object Detection

- Created a real-time motion detection system using Python and OpenCV, implementing image processing and contour tracking for accurate object recognition.
- Technologies: Python, OpenCV, Computer Vision, Image Processing

Automated Hydroponic System

- Developed an IoT-based hydroponic setup using Arduino/ESP32 with pH, TDS, NPK, temperature, humidity, and water level sensors. Automated nutrient and water delivery using peristaltic pumps, solenoid valves, and relays, with real-time monitoring via AWS IoT Core, ThingSpeak, and Blynk.
- Technologies: Arduino, ESP32, AWS IoT Core, ThingSpeak, Blynk, Sensors and IoT.