M. Sai Swasthik

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Portfolio: saiswasthik-portfolio.vercel.app | LinkedIn | GitHub

About Me

Software Developer specializing in backend engineering and AI-powered applications. Proficient in Python, FastAPI, and databases (MySQL, MongoDB, Firebase), with hands-on experience in LLMs (OpenAI, Gemini, LangChain). Skilled in designing scalable APIs, automating data workflows, and delivering impactful solutions in healthcare and logistics domains.

Technical Skills

- **Programming:** Python
- **Frameworks & Libraries:** FastAPI, Django, Django REST Framework, Streamlit
- **Databases:** MySQL, MongoDB, Firebase
- **AI & LLMs:** OpenAI APIs, Gemini APIs, LangChain
- **Web Technologies:** JavaScript/React.js
- **Data Processing & Automation:** BeautifulSoup, Pandas, Selenium
- **Version Control & Deployment:** Git, GitHub

Tools & Platforms

- **AI & Development Tools:** Cursor, Windsurf, Vapi.ai, VS Copilot, Vertex AI
- **Collaboration & IDEs:** Replit
- **Deployment & Hosting:** Azure, Render, Replit (for MVP deployments)

Software Developer | Slickbit Technologies | September 2023 – present (2 Years)

- Developed and optimized **REST APIs** using FastAPI and Django.
- Built **data scraping solutions** with BeautifulSoup, Pandas, and Selenium.
- Integrated **AI/LLM models (OpenAI, Gemini, LangChain)** into applications.
- Optimized **MySQL & MongoDB** databases for performance and scalability.
- Delivered projects like **clinical trial e-consent, shipment tracker, and metadata extractor**.

Education

B.Tech – Electronics and Communication Engineering
University College of Engineering and Technology, MGU, Nalgonda
2023 | 69%

Projects

1. Meta-Doc Automator

A document automation system designed to **extract metadata from medical documents** such as clinical trials and drug research papers. The application retrieves documents stored in **SharePoint**, processes the text, and extracts the required metadata. The extracted information is then exported into an **Excel file**, which is automatically saved back into the same SharePoint folder.

This solution significantly reduces the **manual effort and time** required for metadata extraction, improving efficiency in handling large volumes of research documents.

Key Features:

- Automated **document retrieval from SharePoint**.
- Intelligent **text extraction and metadata identification** from medical research documents.
- **Excel file generation** containing structured metadata.
- Automatic **upload of processed Excel files back to SharePoint**.
- Reduced manual processing time, ensuring faster and more accurate data handling.

Technologies Used:

- **Python** – core logic and automation
- **FastAPI** – backend service for processing and API integration
- **Gemini LLM** – AI-powered metadata extraction
- **React.js** – frontend interface for document management

2.Shipment Tracker

An intelligent **shipment monitoring application** designed to track **temperature deviations** in medical and pharmaceutical shipping containers. If the container's temperature exceeds the predefined threshold, the application automatically **notifies logistics teams and pharmacists via interactive phone calls** powered by **Twilio**.

The interactive call provides detailed information on **how long the container stayed outside the safe temperature range**, enabling quick corrective action. This ensures that medicines and drugs are **protected from spoilage during transportation**, saving costs and maintaining compliance with pharmaceutical standards.

Key Features:

- Continuous **temperature monitoring** of medical shipment containers.
- **Real-time alerts** via interactive **Twilio phone calls**.

- Detailed deviation reports, including **duration of temperature breaches**.
- **AI-powered insights** using Gemini LLM for anomaly analysis and reporting.
- Prevents **drug spoilage and financial losses** during transport.

Technologies Used:

- **Python** – core application logic
- **FastAPI** – backend services and APIs
- **React.js** – user-friendly dashboard for monitoring shipments
- **Gemini LLM** – AI for anomaly detection and smart reporting
- **Twilio** – automated interactive voice call notifications

3 .E-Consent Clinical Trial Participation

A secure and user-friendly **digital consent application** designed for participants enrolling in **clinical drug trials**. The system enables participants to complete an **e-consent form** while interacting with an **AI-powered chatbot** that addresses common questions related to the trial, such as:

- Trial **duration** and **location**
- Possible **symptoms** or side effects
- General **trial guidelines**

After form submission, the system generates a **unique participant ID**, ensuring privacy and preventing exposure of personal details. The application also includes an **admin dashboard**, where administrators can review and approve participation requests.

This solution improves **participant awareness and transparency** while reducing manual effort in managing consent forms, ensuring compliance with clinical trial protocols.

Key Features:

- **AI-powered chatbot** to answer participant queries in real time.
- **E-consent form** for secure trial enrollment.
- Automatic **unique ID generation** to protect participant identity.
- **Admin dashboard** for reviewing and approving applications.
- **Secure authentication** and data storage using Firebase.

Technologies Used:

- **Python** – core application logic
- **FastAPI** – backend APIs and workflow automation
- **Gemini LLM** – chatbot for participant Q&A
- **Firebase** – secure login (SSO) and data storage
- **React.js**