

SATYAM NAG

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SKILLS

Agentic AI frameworks (OpenAI Agents SDK, LangChain, LangGraph, LangSmith, CrewAI, AutoGen), Model Context Protocol, Gradio, Python, HTML, CSS, GitHub etc.

EDUCATION

- ❖ Bachelor of Science (Mathematics) 2018
- ❖ XII (CHSE, Odisha) 2015

EXPERIENCE

Data Analyst | Department of Commerce, Government of India

April 2018 - November 2024

PROJECTS

👉 **InsightMail**: An AI-powered research assistant built with the **OpenAI Agents SDK** and **Gradio** that automates in-depth web research into comprehensive, well-structured Markdown reports, converts them into professionally formatted HTML, delivers them via email with real-time progress updates through a simple one-click Gradio interface, and logs traces in OpenAI.

👉 **Autonomous Traders**: A multi-agent stock trading simulation powered by the **OpenAI Agents SDK**, the **Model Context Protocol (MCP)** ecosystem, and **Gradio**, featuring four independent trading agents—each with a distinct investment philosophy—paired with dedicated market researcher agents for fully autonomous research, decision-making, and trade execution. The system leverages a robust architecture with one **MCP client**, eight specialized **MCP servers**, and 30+ **MCP tools**, utilizing **SQLite** to persistently save all traders' complete trading history in a database file for reliable long-term tracking and analysis, enabling a complete agent-driven loop without any manual intervention.

👉 **Sidekick**: A persistent AI agent built with **LangChain**, **LangGraph**, and **Gradio**, integrated with **LangSmith** tracing for comprehensive run monitoring, debugging, and performance analysis. This system acts as an autonomous co-worker, iteratively executing tasks with 15+ tools until user-defined success criteria are met or clarification is needed. It delivers tasks such as browser automation, internet searches, executing Python code, image generation, weather lookups, file management, and push notifications etc.

👉 **Stock Picker**: An automated multi-agent AI workflow built with **CrewAI** that discovers trending companies in user-specified sectors via real-time search, performs deep, structured financial analysis, and selects the optimal investment opportunity with a detailed thesis, orchestrated by a dedicated manager agent. The system integrates long-term persistent memory (**SQLite** database) and short-term memory to eliminate redundant research and outputs structured JSON files alongside a comprehensive Markdown decision report.

👉 **Engineering Crew**: Developed a Trading Simulation Account Manager, a self-contained stock trading simulation platform, by orchestrating a **CrewAI**-powered team of specialized AI agents (Lead Engineer, Backend Engineer, Frontend Engineer, and Test Engineer) that collaboratively designed the system architecture, implemented the core logic, built the user interface, and created automated tests ensuring reliability. The agents produced a robust backend engine for account creation and fund management, validated buy/sell trades, negative balance prevention, and an interactive **Gradio** UI for operations.

👉 **Agent Creator**: An autonomous AI system built with **AutoGen Core** and **AutoGen AgentChat** that dynamically generates, registers, and launches fully independent AI agents at runtime from user-specified requirements. The generated agents operate autonomously upon creation, executing tasks and storing outputs in Markdown files without manual intervention, enabling a complete hands-off cycle for scalable, on-demand agent development.

CERTIFICATES

- ❖ [Professional Certificate on Learning Python for Data Science](#) from HarvardX (Harvard University)
- ❖ [Professional Certificate on Google Data Analytics](#) from Google
- ❖ [Specialization Certificate on Python for Everybody](#) from University of Michigan
