

Aditi Agrawal

aditi.agrawal2112@gmail.com | [LinkedIn](#) | [GitHub](#) | [Personal Website](#)

Education

University of California, Davis, USA	Sept 2024 – March 2026
Master's in Computer Science CGPA: 3.91/4.0	
MIT-WPU, Pune, India	Sept 2020 – June 2024
Bachelor of Technology in Computer Science and Engineering CGPA: 9.21 / 10.0	
IIT-Madras, Madras, India	Sept 2021 – Dec 2024
BS in Data Science and its Application CGPA: 8.08 / 10.0	

Experience

Full Stack & AI Developer Intern, Butterflo, USA	Jan 2026 – Present
<ul style="list-style-type: none">Designed an automated image classification pipeline using Vertex AI and Gemini Vision Pro for large-scale datasets.Optimized LLM prompt pipelines and agentic workflows using N8N and LangChain, reducing inference latency and API costs by 50% while maintaining high accuracy.Managed production ML deployment (MLOps) on GCP, including dataset versioning and real-time model endpoints.	
Research Assistant, Speech Neuroengineering & Cybernetics Lab	April 2025 – Present
<ul style="list-style-type: none">Led a demographic sensitivity analysis on 147 sEMG features in collaboration with Meta's Neurotechnology program.Built Mixed-Effects Models to quantify demographic effects on sEMG signals, identifying feature sensitivity to sex and subcutaneous fat.	
Data Analytics Intern, fAlshion Inc., USA	June 2025 – Aug 2025
<ul style="list-style-type: none">Built a conversational multimodal recommendation engine using LangChain and OpenAI's CLIP for semantic search.Developed automated ETL pipelines to process unstructured fashion API data and store vector embeddings in Amazon S3.Implemented collaborative filtering models and visualized trend analysis via Power BI for cross-functional decision-making.	
Software Engineering Intern, Globemind Pvt Ltd, Pune, India	Jan 2023 – Dec 2023
<ul style="list-style-type: none">Architected a Full Stack Hotel Management System to automate bookings, room assignments, and payment workflows.Developed responsive React interfaces and RESTful APIs to handle real-time guest check-ins.Managed the full SDLC for a private client, from requirement gathering to deployment and post-launch maintenance.	

Projects

Oasis: Intelligent Multi-Account Calendar Assistant | [Github](#) | [Demo](#)

- Architected a Stateful Agentic Workflow using **LangGraph** and **Google Gemini** that autonomously routes user requests through specialized nodes for intent parsing, historical querying, and conflict resolution.
- Implemented a **Multi-Account Reasoning Engine** to manage cross-calendar availability, utilizing a custom "Resolver" node to calculate inverse availability and identify optimal scheduling gaps.
- Engineered an automated Intelligence Pipeline that transforms unstructured natural language into validated JSON objects for the **Google Calendar API**, enabling precise task synchronization and automated daily briefings.

Farm Sage: AI-Powered Strategic Automation | [Github](#)

- Developed a **parallel agentic workflow** using LangGraph and Morph LLM to simulate complex agricultural trade-offs.
- Designed a **Composite KPI Scoring** engine ($Score = f(Water, Cost, SoilHealth, Risk)$) that ranks seasonal strategies.
- Built an interactive recommendation dashboard featuring a glassmorphism UI to visualize risk analysis.
- Engineered **Pydantic-based JSON** enforcement to ensure deterministic scoring and **context-aware orchestration**.

Publications

Threat Detection in Social Media Networks Using ML-Based Network Analysis Link	May 2025
<ul style="list-style-type: none">Developed an ANN-based intrusion detection model for social media network traffic using the UNSW-NB15 dataset.Performed data preprocessing, class imbalance handling, and model evaluation using recall, F1-score, and ROC-AUC.	
Food Waste Management with Community Collaboration DOI	May 2023
<ul style="list-style-type: none">Developed with MySQL and Apache; frontend implemented using HTML and JavaScript.Research focused on scalable, community-driven food waste management solutions.	

Technical Skills

AI & Automation: LangGraph (Agentic Workflows), LangChain, LLMs, Prompt Engineering, TensorFlow, PyTorch, MCP, N8N
Programming & Full Stack: Python, SQL, React (Hooks, Context API), Next.js, FastAPI, JavaScript, HTML, CSS
Data & Cloud: GCP (Vertex AI, BigQuery, Cloud Run), AWS (S3), Tableau, Power BI, Docker, Vercel