

Shubhayan Srivastava

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EDUCATION

University of Southern California

Los Angeles, CA

Bachelor of Science in Computer Science

Aug 2023 – May 2026

- **Relevant Coursework:** Data Structures and Algorithms, Discrete Mathematics, C++ Programming

EXPERIENCE

Founder

Jan. 2023 – Present

Hera (heradashboard.vercel.app)

Los Angeles, CA

- Founded Hera, an analytics tool that analyzes air pollutant data through **natural language prompts**, allowing **local government officials** to "talk" to their data and derive insights
- **Launched in 15 cities**, improving 45,000+ lives in 2 months
- Developed a **search-driven analytics** system using **OpenAI** and **LangChain**, and a **ReactJS** dashboard
- Integrated with and normalized **multiple data sources**, including **map, weather and news APIs**
- Managed entire **software development lifecycle**, from ideation and design with **Figma** to development, testing, and deployment with **Vercel**, and **Firebase**

Software Engineer Intern

May 2024 – Aug 2024

ThoughtMinds

San Francisco, CA

- Developed an **AI debugging agent** for the AI copilot platform, reducing bug identification time by 170%
- Implemented **multi-agent architecture** using **LangGraph** to efficiently locate bugs across codebases
- Containerized agent using **Docker** to streamline CI/CD pipelines and enable easy scalability
- Utilized **GPT function calling API** to compare previous bug reports via logger files and **Jira**, providing fixes aligned with clients' code style guides

Undergraduate Research Assistant

Jan 2024 – May 2024

University of Southern California

Los Angeles, CA

- Built and fine-tuned ML models using VADER and BERT to **predict stock prices from social media posts**
- Restructured algorithm using AutoTriggeR to improve sentiment analysis and entity recognition accuracy by 27%
- Created **Hierarchical Density Plots** and **time-series visualizations** using **matplotlib**

PROJECTS

Smart Dorm Room Automation | *Golang, C++, Arduino, AWS S3 & EC2*

Jul 2024 – Present

- Automated my dorm room's blinds, door lock and lights using **Arduino and Servo Motors**
- **Built AI system** to control automations and my Google Calendar via voice through Llama 3.1 hosted on **AWS**
- Developed mobile app using **SwiftUI** to control room automations via **Bluetooth**

College Dining Hall Meal Planning App | *Flutter, Node.js, Python, MongoDB*

Jul 2024 – Jul 2024

- Developed a mobile app using **Flutter** with a **Node.js** backend, incorporating **external APIs** for real-time dining hall menu and nutrition data
- Created a **recommendation engine** using **TensorFlow** to provide personalized meal suggestions based on users' nutritional goals and personal tastes, providing curated meals in **under 1 second**
- Designed and developed a **REST API** using Node.js and Express, integrated with MongoDB, resulting in a 30% increase in data processing speed and a 125% reduction in API response time

Personal AI Assistant iOS App | *SwiftUI, Python, Flask, OpenAI, Pinecone, Firebase*

Feb 2024 – Feb 2024

- Developed iOS app with an **empathetic AI bot** with long-term memory (RAG) using **SwiftUI** and **OpenAI**
- Implemented **Google OAuth** to integrate with Google Calendar for **automated scheduling and reminders**
- **Conducted user testing** and collected feedback on 15 users, making data-driven improvements to user experience

TECHNICAL SKILLS

Languages: JavaScript, Python, Java, TypeScript, C/C++, SQL (Postgres), Swift, Golang

Frameworks: React, Next.js, Node.js, Express, Flask, SwiftUI, SciKit-Learn, PyTorch, TensorFlow, Pandas

Developer Tools: Git, XCode, Firebase (Auth, Firestore, Storage, Functions, Analytics, Crashlytics), MongoDB, RESTful API, FastAPI, OpenAI, Pinecone, LangChain, Neo4j, Figma, Supabase, Jira, VS Code, Jupyter Notebook, URM/UML Diagrams, UI/UX Design, State Management, Cloud Computing (GCP, Azure, AWS), Prompt Engineering