

# Hemal Shah

B.Tech. - Computer Science & Engineering

- School of Technology

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## Brief Introduction

Final-year Computer Science student specializing in full-stack development, automation, and AI-powered solutions. Experienced with Python, JavaScript, and workflow tools like n8n, while currently exploring DevOps practices and deployment pipelines. Passionate about building scalable, real-world applications and continuously improving through hands-on projects and internships.

## Key Skills

Python, FastAPI, Docker, n8n, Git, Github, Github Version control, C, C++, C#, Unity

## Education

GSFC University

2022 - 2026

B.Tech. - Computer Science & Engineering - School of Technology | CGPA: **7.12/ 10**

## Internships

Techicom | Academics / Research

02 Jun, 2025 - 02 Jul, 2025

Artificial Intelligence

**Key Skills:** Data science AI

- Developed a **daily sales prediction model** to help local fruit and vegetable vendors forecast demand, optimize inventory purchase, reduce waste, and increase profitability.
- Managed the **end-to-end data science pipeline**, including dataset creation, exploratory data analysis (EDA), data preprocessing, feature engineering, and machine learning model development.
- Built, evaluated, and fine-tuned predictive models using industry-standard techniques to improve forecast accuracy.
- Designed and implemented an **interactive Power BI dashboard** to visualize key insights, sales trends, and daily demand predictions for stakeholders.

SP graphics | Technology

18 Dec, 2023 - 18 Jan, 2024

SP graphics

**Key Skills:** WordPress web designing

- During my internship, I learned the fundamentals of WordPress, including theme customization, plugin integration, page builders (likeElementor), and basic SEO practices.
- I applied this knowledge by independently creating a beginner-level website, handling everything from layout design to content management. The internship strengthened my understanding of CMS platforms and helped me develop a hands-on approach to building user-friendly, responsive websites with minimal code.

SentimentAI | Technology

1 July, 2025 - 31 July, 2025

SentimentAI

**Key Skills:** AI Engineer

- Designed and implemented multiple real-world automation solutions to **eliminate repetitive tasks and improve workflow efficiency** across business operations.
- Built an **Invoice Automation system** using PDF parsers and OCR to extract key fields (items, prices, totals) from scanned and digital invoices, and **structured the data for analytics and storage pipelines**.
- Developed a **Telegram Bot integrated with n8n** that allows users to upload PDFs/images and **perform intelligent document Q&A and file analysis via conversational AI**.
- Created a **Google Maps Scraper** to automatically collect business details (name, address, phone, ratings) for targeted locations and categories, **supporting lead generation and market research**.

- Implemented a **LinkedIn Scraper** to programmatically extract profile data, job insights, and connections for **recruitment and competitor research workflows**.
- Built a **PDF Text Scanner (OCR-based)** tool to detect and extract text from scanned files and images for **search, processing, and data-entry automation**.
- Utilized **Python, JavaScript, BeautifulSoup, Puppeteer, OCR.space API, and n8n** for workflow automation, scraping, OCR, and API-driven integrations.
- Demonstrated strong expertise in **workflow orchestration, API integration, NLP-powered processing, real-time data handling, and intelligent data extraction** across domains including **HR, admin operations, and market research**.

## Projects

**Chess AI** 01 Apr, 2025 - 01 May, 2025

**Mentor:** Bhavika Darji | **Team Size:** 4

**Key Skills:** Unity, C#

**Project Link:** <https://github.com/CYPbhai/Chess/>

- A chess game developed using the Unity game engine with AI that uses reinforcement learning. It's a fully functional complete game. It was developed as a minor project when I was in semester VI at GSFC University.

**GitLite** 01 Dec, 2025 - 01 Dec, 2025

**Mentor:** Bhaumik Machhi | **Team Size:** 1

**Key Skills:** FastAPI, Docker, Github, Render

**Project Link:** <https://hemal9102.github.io/GitLite/>

- Developed a **GitHub-style clone application** using **FastAPI as the backend framework** during my internship at SentimentAI.
- Implemented **JWT-based authentication** to securely manage user login, registration, and protected routes.
- Containerized the application using **Docker** to enable consistent deployment across environments.
- Deployed the FastAPI application on **Render**, configuring environment variables, build steps, and production settings.
- Built the project as a **learning initiative to strengthen skills in FastAPI, backend development, authentication, and DevOps workflows**.

**Pong game** 01 Apr, 2025 - 30 Apr, 2025

**Key Skills:** c# Unity

**Project Link:** [https://github.com/hemal9102/Pong\\_game/](https://github.com/hemal9102/Pong_game/)

- Developed a classic Pong game using Unity and C#, recreating the retro arcade experience with modern features. The game includes two paddles (player vs. player), ball physics, score tracking, and collision handling. I implemented smooth paddle movement using keyboard input, dynamic ball reflection based on contact angles, and game-over conditions based on score limits.

### Telegram AI bot

**Key Skills:** n8n AI agent Automation API HTTP Request

**Project Link:** [https://t.me/Humong\\_bot](https://t.me/Humong_bot)

- I created a Telegram AI bot using n8n that automatically replies to user messages by connecting with an AI API. The workflow handles message input (PDF, Image), we can also extract text from PDF and Image then sends it to the AI, and returns smart responses — all automated without writing backend code. This project improved my skills in API integration, automation, and bot development.

### Portfolio Website

**Key Skills:** Live on server

**Project Link:** [https://hemal9102.github.io/portfolio\\_HK/](https://hemal9102.github.io/portfolio_HK/)

- Developed and maintained a personal portfolio website with technical blog articles, professional social media profiles, and live links to selected projects.

**International Conference ICON-AI-SMT'25 Institute Name:** GSFC University, Vadodara

**20 Feb, 2025 - 21 Feb, 2025**

### **Key Skills: Smart Automation AI model development**

ICON-AI-SMT'25, we learned about the interdisciplinary impact of Artificial Intelligence across science, technology, and management. The conference highlighted cutting-edge research, global collaboration, and practical applications of AI in fields like healthcare, cybersecurity, and business intelligence.

### **Full-stack web development training**

**Institute Name:** GSFC University

### **Key Skills:** Bolt Vo Prompt Engineering UI/UX Supabase

Attended hands-on training focused on leveraging AI-powered tools like Bolt and V0 for accelerating full stack web development. Explored how to generate frontend interfaces, backend logic, and database schema using AI prompts. Practiced building responsive UIs, integrating APIs, and deploying complete applications with minimal manual coding. The training enhanced my ability to prototype applications rapidly, collaborate with AI for development tasks, and adopt modern low-code/no-code workflows into traditional development pipelines.

### **Co-curriculum Activities**

Volunteer, ICON-AI-SMT, 1 International Conference by GSFC University

### **Links**

Github - <https://github.com/hemal9102>

### **Refernces**

- **Preet surti**  
(Graphic Designer, SP graphics)  
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- **Swati Saxena**  
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- **Bhavika Darji**  
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