

# Sarthak Patel

 sarthakpatel1315@gmail.com

 93746 26600

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## Profile Summary:

Software Developer specializing in C# and .NET with hands-on experience designing and deploying licensed ERP and business automation systems used in real-world environments. Skilled in software architecture, database design, API development, and secure licensing systems. Proven ability to independently design, develop, and deploy production-grade applications while managing the full software lifecycle. Strong focus on clean, maintainable code, system performance, and scalable backend development.

## Long Term Career Objective:

To grow as a technology professional with strong interest in Artificial Intelligence, Cybersecurity, and Embedded/IoT systems, aiming to work on intelligent, secure, and reliable software architectures while continuously learning and applying emerging technologies..

## Technical Skills:

- **Programming Languages:**
  - C#, SQL, JAVA, Python, PHP, C Language, HTML, CSS, JavaScript
- **Frameworks:**
  - .NET, Bootstrap, node.js (Basic), Shopify,
- **DataBase:**
  - PostgreSQL, MySQL, SQLite, MongoDB
- **Tools :**
  - Visual Studio, SSMS (SQL Server) , GitHub, Cloudflare

## Soft Skills:

Analytical | Collaborator | Adaptable

## Education:

### Bachelor of Science in Information Technology (B.Sc. - IT)

Shree Ramkrishna Institute of Computer Education and Applied Sciences, Surat

CGPA: 9.23 (2022-2025)

## Activities and societies:

- Volunteer Of **Cyber Security club at SRKI**
- Volunteer Of **SSIP Awareness Corner at SU Carnival**

## Certifications:

- **Drone Technology: Key Skills and Practical Applications** | SVNIT | March 2025
- **Advanced Threat Detection and Mitigation Bootcamp** | SCET | December 2024
- **Introduction to TensorFlow for AI, ML, | DeepLearning.AI** | Jul 2024

For a complete list of certificates, please visit my portfolio website. (<https://sarthak1315.github.io/certificates.html>)

## Experience

### ➤ Software Developer

*Tech Ocean*

*Surat, India*

*May 2025 – Present*

- Built and deployed a production-grade licensed ERP for diamond manufacturing businesses in C#/.NET/SQLite, currently used by **3 business users** in live operations across the full production workflow.
- Architected **5+ core modules** covering job entry, party management, employee tracking, Pic/Ct-based rate calculation, and payment tracking — with full workflow traceability across the diamond manufacturing process.
- Engineered a **one-click billing system** for multiple parties simultaneously — eliminating manual calculation entirely and automating invoice generation, salary calculation, and payment tracking with accurate financial logic.
- Architected a secure software licensing and activation system that validates license keys, prevents unauthorized usage, and supports controlled commercial distribution as a packaged executable.
- Developed an analytics and reporting suite generating invoice summaries, job history, revenue analysis, and employee payment reports with export functionality for business decision-making.
- Designed the complete relational database schema in SQLite with SQL Server support, including backup/restore mechanisms to ensure data integrity and recovery in production.
- [https://sarthak1315.github.io/Projects/tech-ocean-diamond-job-work/DMS\\_DetailedDoc.pdf](https://sarthak1315.github.io/Projects/tech-ocean-diamond-job-work/DMS_DetailedDoc.pdf)

### ➤ Software Development Intern

*Desai Software*

*Surat, India*

*Nov 2024 – May 2025*

- Worked on Khana Khazana Smart POS System, a web-based restaurant management tool built using ASP.NET, C#, and SQL Server with a clean 3-Tier Architecture.
  - Designed modules for menu, table, billing, and user-role management with Crystal Report integration.
  - Deployed the system as a live demo using shared hosting, with SQL Server integration and secure Crystal Report generation practices.
- Developed a custom API for Crystal Reports in a live Desai Software product.
  - The API fetched data from a hosted SQL Server, dynamically generated Crystal Reports, exported them to PDF, and returned the file path to the client.
- Gained hands-on experience with Windows Forms, ADO.NET, DataSets, and Stored Procedures.
- Practiced clean coding standards, secure input handling, and separation of concerns across presentation and data layers.

## Projects / Experience :

### ➤ Adversarial Attacks & Defense Mechanisms Analysis | Personal Blog & GitHub | 2024

- Analyzed methods to generate **adversarial examples** that mislead Machine Learning models, including the **Basic Iterative Method (BIM)**.
- Studied and proposed **defense strategies** such as adversarial training and input validation techniques.
- Documented findings in a technical blog with practical examples.
- Deep understanding of **ML security vulnerabilities and threat models**.
- Learned how **small perturbations** can significantly impact ML model predictions.
- Gained exposure to **secure AI design principles** and robustness evaluation.
- Strengthened ability to **analyze, explain, and document complex AI concepts**.

Blog: <https://sarthak1315.github.io/blog-post.html?id=adversarial-attacks>

## ➤ Khana Khazana - Smart POS System

- **Tech Stack:** ASP.NET, C#, SQL Server, Crystal Reports, sweetalert2, Bootstrap
- **Architecture :** 3-Tier (Presentation, Business Logic, Data Access)
- Developed a responsive and modular restaurant POS system enabling table, menu, order, billing, and user management for multiple roles (Admin, Waiter, Cashier, Chef). Integrated Billing with Crystal Reports. Deployed and tested the system with live hosting setup.

## ➤ My AI

- **Tools :** NodeJS, JavaScript, HTML, CSS
- **Description :** Developed an AI chatbot using Node.js and Cloudflare Wrangler, leveraging the open-source LLaMA 2 7B Chat (INT8) model by Meta AI. Deployed within Cloudflare's free-tier limits: 100,000 requests/day.
- **Live :** <https://myai.sarthakpatel1315.workers.dev/>

## ➤ Student Admission Management System

- **Tools:** ASP.NET, C#, SQL Server, HTML, CSS, JavaScript, sweetalert2, Bootstrap
- **Description:** The Student Management System is a web-based application designed to manage the administrative functions of an educational institution. It includes modules for Admin, Admissions, Student Portal, and Faculty Portal. Admins can handle departments, courses, faculty, fee structures, and merit lists. Students can register, upload documents while faculty members can verify student documents and manage student information. The system ensures efficient data handling and user authentication to safeguard sensitive information.
- **GitHub Repo:** <https://github.com/Sarthak1315/Student-Admission-Management-System>

## ➤ MY Upload

- **Tools:** PHP, MySQL, JavaScript, HTML, CSS
- **Description:** MyUploads is a user-friendly file upload and download website with secure authentication features, built using PHP.
- **GitHub Repo:** <https://github.com/Sarthak1315/MyUploads>

## Personal Details:

Languages Known: Gujarati, Hindi, English,

Address: Surat, Gujarat.

## Contact Information:

Email: [work.sarthakpatel@gmail.com](mailto:work.sarthakpatel@gmail.com) / [sarthakpatel1315@gmail.com](mailto:sarthakpatel1315@gmail.com)

Phone: +91 93746 26600

GitHub: [github.com/Sarthak1315](https://github.com/Sarthak1315)

Portfolio: [sarthak1315.github.io](https://sarthak1315.github.io)

LinkedIn: [linkedin.com/in/sarthak-patel-sp1315](https://linkedin.com/in/sarthak-patel-sp1315)