

Sarthak Patel

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| Surat, Gujarat, India

Professional Summary

Software Engineer with 1+ year of production experience building and deploying licensed ERP and business automation systems using C#, .NET, and SQL Server. Designed and shipped a live diamond manufacturing ERP used by 3 active business clients, covering end-to-end workflow including billing automation, employee tracking, and secure license key validation. Proficient in REST API development, relational database design, 3-tier architecture, and OOP principles. Strong interest in Artificial Intelligence, Cybersecurity, and adversarial ML research, with hands-on certifications in threat detection and TensorFlow.

Technical Skills

Languages: C#, Python, Java, SQL, PHP, JavaScript, HTML, CSS, C

Frameworks & Libraries: .NET, ASP.NET, ADO.NET, Bootstrap, Node.js, TensorFlow, SAP Crystal Reports, Shopify

Databases: SQL Server (SSMS), PostgreSQL, MySQL, SQLite, MongoDB

Developer Tools: Visual Studio, Git, GitHub, Postman, Cloudflare Workers, Wrangler, Docker

Cloud Platforms: AWS (EC2), Docker (containerized deployments)

Cybersecurity: Threat Detection, Adversarial ML, Secure Licensing Systems, Input Validation, OWASP Principles

Concepts: OOP, REST API, 3-Tier Architecture, MVC, Stored Procedures, Software Licensing, Agile

Work Experience

Software Engineer — Desai Software, Surat, India

May 2025 – Present

- Built and deployed a production-grade licensed ERP for diamond manufacturing businesses using C#, .NET, and SQLite — currently live with 3 active business clients managing full production workflows.
- Architected 5+ core modules covering job entry, party management, employee tracking, rate calculation (Pic/Ct-based), and payment tracking with complete workflow traceability.
- Engineered a one-click billing system for multiple parties simultaneously, automating invoice generation, salary calculation, and payment tracking — eliminating all manual calculation.
- Designed a secure software licensing and activation system with license key validation, anti-tamper logic, and 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.
- Designed the complete relational database schema in SQLite with SQL Server support, including automated backup and restore mechanisms for production data integrity.

Software Development Intern — Desai Software, Surat, India

Nov 2024 – May 2025

- Developed Khana Khazana Smart POS System — a web-based restaurant management application using ASP.NET, C#, and SQL Server with 3-Tier Architecture (Presentation, Business Logic, Data Access).
 - Designed modules for menu, table management, billing, and role-based access control (Admin, Waiter, Cashier, Chef).
 - Integrated Crystal Reports for dynamic billing, deployed as a live demo on shared hosting with SQL Server.
- Built a custom REST API for Crystal Reports in a live Desai Software product — fetched SQL Server data, dynamically generated reports, exported to PDF, and returned file paths to the client.
- Applied clean coding standards, secure input handling, and OOP principles using ADO.NET, DataSets, and Stored Procedures.

Projects

Adversarial Attacks & Defense Mechanisms in ML | *Python, TensorFlow, Machine Learning Security*

- Researched and documented adversarial attack methods (including Basic Iterative Method) that mislead ML models through small input perturbations — published findings in a technical blog with practical examples.
- Proposed defense strategies including adversarial training, input validation, and robustness evaluation — demonstrating deep understanding of AI/ML security threat models and secure AI design principles.

My AI — Serverless LLM Inference Endpoint | *Node.js, Cloudflare Workers, LLaMA 2* | *Live: <https://myai.sarthakpatel1315.workers.dev/>*

- Deployed a serverless LLM inference endpoint using Cloudflare Wrangler and Meta's open-source LLaMA 2 7B Chat (INT8) model, capable of handling 100,000 requests/day within Cloudflare's free-tier limits.

Khana Khazana Smart POS System | *ASP.NET, C#, SQL Server, Crystal Reports, Bootstrap*

- Full-stack restaurant POS system with role-based access (Admin, Waiter, Cashier, Chef), table and order management, billing automation with Crystal Reports, and live hosted deployment.

Student Admission Management System | *ASP.NET, C#, SQL Server, JavaScript, Bootstrap*

- Web application for institutional administration covering admissions, student portal, faculty portal, department management, fee structures, merit lists, and secure document verification workflows.

MyUploads — Secure File Hosting | *PHP, MySQL, JavaScript, HTML, CSS*

- User-friendly file upload and download platform with secure authentication, built in PHP with MySQL backend.

Lead Management System (LMS) — Multi-Tenant SaaS | *ASP.NET, C#, PostgreSQL, JavaScript, Bootstrap, HTML, CSS* | *Live: <https://lead.runasp.net/>*

- Designed and deployed a multi-tenant SaaS Lead Management System on live hosting, enabling multiple businesses to independently manage leads, teams, and follow-up pipelines with full tenant data isolation in PostgreSQL. Containerized the application using Docker for consistent, environment-independent deployment.
- Built a Super Admin Portal for tenant onboarding, user management, plan control (Free/Lifetime), and lead quota enforcement across tenants.
- Developed a real-time Action Center tracking today's, overdue, and upcoming 7-day follow-ups with type filters (Call, Demo) and one-click scheduling — alongside lead lifecycle management across 7 statuses (New, Contacted, Interested, Negotiation, OnHold, Converted, Lost).

Education

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

2022 – 2025

Shree Ramkrishna Institute of Computer Education and Applied Sciences, Surat | CGPA: 9.23

- Volunteer — Cyber Security Club, SRKI
- Volunteer — SSIP Awareness Corner, SU Carnival

Certifications

- Advanced Threat Detection and Mitigation Bootcamp | SCET | December 2024
- Introduction to TensorFlow for Artificial Intelligence and Machine Learning | DeepLearning.AI | July 2024
- Drone Technology: Key Skills and Practical Applications | SVNIT | March 2025

Full certificate list: sarthak1315.github.io/certificates.html