

SIDDHARAJ SINH RATHOD

Vadodara, Gujarat

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Education

Pandit Deendayal Energy University

August 2019 – May 2023

Bachelor of Technology - Information and Communication Technology; CGPA: 9.5

Gandhinagar, Gujarat

Technical Skills

Languages: C#, Python, HTML / CSS, JavaScript, SQL, Java, Kotlin

Databases: PostgreSQL, MySQL, MongoDB

Technologies/Frameworks: .NET Core, ADO.NET, Entity Framework, Elasticsearch, OpenSearch, Redis, Auth0, Apache Airflow, Lambda Functions, SQS, Azure Functions, Docker, Linux, Github Actions, React JS, Express JS, Node JS

Experience

Promact Infotech Pvt. Ltd.

June 2023 – Present

Software Engineer - I

Vadodara, Gujarat

- Gained hands-on experience with **Git** for version control and developed strong skills in **C# programming**.
- Learned to develop web applications and APIs using **ASP.NET Core**, leveraging **Entity Framework Core** for ORM-based operations and **ADO.NET** for scenarios requiring direct, fine-grained database access.
- Implemented **role-based authentication** and **social logins** with **Auth0**, created custom post-login actions to add roles to JWT, merge users with existing accounts, and automate user registration by calling APIs to add users into the database and utilized **Identity Framework** with **Entity Framework Core** for user management and secure data storage.
- Implemented **full-text search** and **semantic search** for *Visualogyx* and *BharatLaw.AI* using **Elasticsearch**, **Azure AI Search**, and **OpenSearch**. Analyzed existing systems and denormalized tables, built search indexes, and developed queries with filters, highlights, and pagination. Wrote optimized **Python** migration scripts to index legacy data, minimizing DB load and improving performance through **multithreading**.
- Integrated **LLM-based AI features** into *BharatLaw.AI* by enabling seamless interaction between **Python-based AI services** and the **.NET backend**, where **.NET** functioned as a **proxy server** to securely manage requests, process responses, and ensure efficient communication between the AI models and client applications.
- Successfully implemented two **ETL pipelines**: a batch processing pipeline using **Apache Airflow** for *BharatLaw.AI*, and a near real-time pipeline utilizing **SQS**, **S3**, and **Lambda** for *Visualogyx*.
- Reduced database load by implementing **Redis** caching for frequently accessed data and configured **log routing** to the **ELK stack** for real-time monitoring and performance insights. Additionally, implemented structured logging with **Serilog** and set up automated error notifications to **Microsoft Teams** channels, ensuring faster issue detection and resolution.
- Optimized **API performance** by offloading tasks to background processes and integrated **Google Invisible reCAPTCHA** to prevent abuse of public APIs.
- Gained hands-on experience with **AWS** and **Azure** cloud services, including **AWS SES**, **SQS**, **Lambda functions**, **Kinesis**, **DMS**, and **Azure Blob Storage**, as well as **Azure Cognitive Search**. Integrated these services into applications to streamline workflows, enhance scalability, and optimize performance.
- Leveraged GitHub Copilot to enhance productivity during the development of APIs and web applications, allowing for faster iteration and reduced debugging time.

Projects

FindFoodNearBy | *Python, Elasticsearch, Google Places API, StreamLit*

- Designed and developed a food discovery application using Python, integrating Elasticsearch for efficient location-based search functionality.
- Leveraged the Google Places API to fetch data on nearby restaurants, cafes, and food outlets based on user preferences.
- Implemented a natural language query processor using OpenAI GPT, enabling users to search for restaurants with conversational queries.

AI Calendar App | *.NET Core Web App, .NET Core Web API, .NET Aspire, MCP Server, LLM*

- Designed and developed a full-stack calendar application enabling users to create, read, update, and delete events.
- Integrated Microsoft Graph API for real-time calendar synchronization and secure OAuth 2.0 authentication.
- Leveraged MCP Server to facilitate communication between the application and Large Language Models (LLM), enabling natural language queries for intelligent event management.