

# MITESH PATEL

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## Summary

Full stack developer with over 2 years of experience building scalable web applications using Python, JavaScript/TypeScript and React. Skilled in designing and deploying end-to-end solutions, from database migrations with PostgreSQL/GraphQL to responsive front-end components. Proven ability to optimize performance and collaborate in agile environments, now seeking to contribute to security-focused platform development.

## Education

University of Bridgeport | *Master of Science, Computer Science* (GPA: 3.59/4.0)

Jan 2024 - Dec 2025

Sarvajanik College of Engineering & Technology | *Bachelor of Engineering, Mechanical Engineering* (GPA: 7.87/10) Jul 2018 - May 2022

## Technical Skills

- **Programming:** Java, JavaScript, TypeScript, Python, SQL, C++, HTML, CSS, React, Rust
- **Data Engineering:** ETL/ELT, Data Warehousing, Lakehouse Architecture, Data Modeling (Star/Snowflake)
- **Cloud & Big Data:** AWS (S3, Glue, Athena, Redshift, Lambda), Snowflake, Azure
- **Tools:** Git, Jira, Power BI, VS Code, AWS, Google Cloud, Docker, Kubernetes, GitHub, Postman
- **Databases:** MySQL, PostgreSQL, DynamoDB, MongoDB
- **Professional Skills:** Software Engineering, Generalist Skills

## Experience

University of Bridgeport

Sep 2024 - Dec 2025

*Research Assistant*

*Bridgeport, CT*

- Managed the makerspace for the interdisciplinary department, supporting student and faculty projects.
- Assisted members and students with lab equipment, maintaining accurate records and ensuring availability.
- Demonstrated new technologies and guided interdisciplinary project teams in implementing innovative tools.
- Maintained and updated Excel tracking sheets used for daily reporting and operational reviews.

TechStaunch Software Solutions Pvt. Ltd

Jan 2022 - Jan 2024

*Full Stack Developer*

*Remote, USA*

- Architected and deployed full-stack applications using React-based Next.js, MERN, and PERN, delivering high-performance front-end components and scalable backend services.
- Led the migration of a global non-profit social platform from Firebase to PostgreSQL/GraphQL, rewriting performance-critical backend modules in Rust to improve throughput and reliability.
- Collaborated directly with clients and cross-functional teams in Agile environments to gather requirements, apply software engineering practices in sprint planning, deliver enhancements, and provide ongoing maintenance support.
- Implemented Redux-Saga, caching strategies, and AWS infrastructure using Python Lambda functions to ensure high availability, optimized API performance, and responsive user experiences.

## Projects

Hybrid Stock Price Prediction Model | §

- Built a real-time stock prediction system combining ARIMA (linear trends), LSTM (nonlinear patterns), and FinBERT sentiment analysis for news-driven signals.
- Developed a hybrid ARIMA-LSTM model enhanced with FinBERT sentiment analysis, achieving 32 per lower RMSE vs. ARIMA, 17 per lower RMSE vs. LSTM, 65 per directional accuracy, and 20 per reduction in news-driven prediction errors.
- Improved reporting efficiency by 35% through schema discovery and Glue Crawler automation.
- Built an interactive Streamlit dashboard supporting model selection, time-range filtering, and real-time visualization of predictions, sentiment trends, and technical indicators for clear, explainable insights.

AWS SleepHealth Glue ETL Project | §

- Designed and implemented a complete ETL data pipeline using AWS-Glue, S3, Athena to process the Sleep Health Lifestyle dataset.
- Automated schema discovery with a Glue Crawler, populating the AWS Glue Data Catalog for seamless metadata management. Integrated with Athena to enable fast SQL-based querying and prepared datasets for BI and analytics.
- Optimized data storage by saving transformed data in Parquet format, enabling faster queries and cost-efficient storage.

AI Chatbot with Retrieval-Augmented Generation (RAG) | §

- Built an end-to-end AI chatbot using Retrieval-Augmented Generation to provide accurate, document-aware responses from PDF data.
- Implemented document ingestion, embeddings, and semantic search using LangChain with Chroma/FAISS vector databases.
- Optimized response speed and relevance using Groq-powered LLM inference and prompt engineering techniques.

InsightFlow – Conversational AI for CSV Data Analysis | §

- Built a conversational AI agent enabling users to analyze CSV data using natural language, eliminating the need for SQL or coding.
- Developed a Streamlit-based web application with CSV upload, data preview, automated summaries, and context-aware multi-turn chat
- Integrated Groq LLaMA 3.3 (70B) to generate insights, recommendations, and auto-created visualizations via Python code.

Employee Management System (EMS)

- Developed a full Employee Management System using ReactJS, Redux, NodeJS, ExpressJS, and MongoDB with features like order handling, menu customization, KOT/invoice generation, and shift tracking.
- Built scalable APIs, optimized state management, implemented real-time updates, and designed responsive UIs for admins and staff.
- Collaborated with clients to gather requirements, provide updates, and enhance overall system usability and performance.