

Tirth Shah

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EDUCATION

Texas A&M University, College Station

Master of Science in Management Information Systems | GPA: 3.67/4.0

Aug 2024 – May 2026

Texas, USA

Sardar Vallabhbhai Patel Institute of Technology

Bachelor of Engineering (BE) in Computer Engineering | GPA: 3.95/4.0

Jul 2017 – Jul 2021

Gujarat, India

WORK EXPERIENCE

Utilities and Energy Services

Data Engineer Student Worker

Mar 2025 – Present

Texas, USA

- Designed scalable **ETL** pipelines in **python** to process data from 100+ facilities across TAMU, improving billing accuracy & forecasting
- Automated **anomaly detection**, **dashboards** and reporting **workflows**, cutting manual effort by 95% using **SSRS**, **SQL**, **excel & python**
- Integrated external datasets (weather, events, occupancy) to map energy **KPIs** and surge patterns, improving forecasting accuracy by 30%

Tata Consultancy Services

Data Engineer

Jan 2024 – Aug 2024

Gujarat, India

- Converted legacy **SAS code** to transformative **python scripts**, decreasing processing time by 80% & cost by 50% in **prod environment**
- Optimized existing reports to include dynamic **data visualization** for better impact using **python**, improving customer satisfaction
- Applied advanced **statistical modeling** & **ML** techniques to analyze high-volume customer data & improve **business strategies**
- Implemented edge cases and programmed reliable **automation scripts** using **excel macros** to reduce manual checks and efforts by 90%

Tata Consultancy Services

Migration Analyst

Aug 2021 – Dec 2023

Gujarat, India

- Migrated On-Prem Architecture to **GCP**, implementing **data fabric** to achieve over 40% to 50% enhancement in hit ratio across systems
- Performed large scale complex **redesigns** and constructed scalable **automation** jobs that simplified manual configuration by 30% to 40%
- Collaborated with **cross-functional teams** to translate **business requirements** into **technical specifications** for analytics projects
- Compared pre-trained **AI & ML** models for credit scoring, improving prediction accuracy by 15% through **statistical modeling**

Alphaa AI

Data Visualization Analyst Intern

Nov 2020 – Feb 2021

Gujarat, India

- Engineered **dashboards** for a major U.S. superstore, elevating revenue by 20% to 40% using **forecasting** & **Monte-Carlo simulation**
- Augmented **sales & marketing** campaign across social media platforms by 20% to 30%, using **NLP** & semantic data analysis models
- Created **sports analytics dashboard**, enhancing player efficiency and identifying critical weak points as per historical **data analysis**

PROJECTS

- CHAT-C.P.T.** | [\[Demo\]](#): A generative AI solution utilizing RAG architecture, LangChain, Fast-API & Streamlit to simplify semester degree planning for students. Offering personalized, 24/7 agentic AI chatbot with scalable & secure solutions with integrated guardrails
- Inventory Management Tool**: Developed a database solution using AWS & MariaDB to handle ordering, tracking, and enable historical price analysis. Provided ability to perform CRUD operations, triggers & stored procedure to enhance data consistency & integrity
- Market Basket Analysis** | [\[Article\]](#): leveraged ML models to understand customer expenditure traits & patterns over different financial quarters and seasonal occasions. Incorporated association and linking for product paring & positioning to grow the sales by 20% to 30%
- Data Visualization & Exploratory Data Analytics** | [\[Video\]](#): Developed user-friendly dashboards to support data-driven decisions, predicting product sales and strategically targeting a 20% revenue increase by translating complex data into actionable business insights

SKILLS & CERTIFICATION

Language: Python, Java, C, SQL, HTML/CSS, Typescript, Next.JS, Shell Scripting, BASH, Streamlit, JSON, YAML

Technical: ML, Data Analytics, Statistics, Data Transformation (ETL/ELT), Data Warehousing, Data Modelling, Data Pipelines, Generative AI, LLM, RAG, Prompt Engineering, Vector Embeddings, Cloud Computing, API Handling, CI/CD, Dynamic Programming, Deployment

Tools: AWS, GCP, Azure, Excel, PowerBI, Airflow, Anaconda, GitHub, SSRS, Hugging Face, LangChain, OpenAI, Kafka, Docker, Terraform

Databases: PostgreSQL, MySQL, SQL Server, MongoDB, DynamoDB, Redis, MariaDB, Pinecone, Supabase, Firebase, Big Query

Certification: Microsoft Certified Azure Associate - Data [\[DP-203\]](#), Administrator [\[AZ-104\]](#), Fundamentals - Data [\[DP-900\]](#), AI [\[AI-900\]](#)

LEADERSHIP & ACHIEVEMENTS

- Mays Business School MS Excellence Scholarship (2025-26)**: Awarded for academic excellence, leadership, services & impactful initiatives
- Recreational Sports Center @TAMU**: Recognized twice as Employee of the Month for Cricket & promoted to pro-leadership staff team
- Indian Graduate Student Association**: Fostered community engagement for international students at Texas A&M University by organizing 10+ cultural events (5000+ attendees) managing ticketing, logistics, strategic event planning, promotions & community selfless service efforts
- Chief Coordinator @VISION'19|18**: Orchestrated an interdepartmental college festival having a footfall of 2000+ participants. Managed a team of more than 100 students. Donated 90% of profit to nearby local schools and provided students with bags, notebooks, and stationery
- Community Services (70+ Hrs.)**: Volunteered in drives catering to Traffic Safety| Fitness| Blood Donation | Saving Electricity | Education
- Awards**: Awarded with TCS Special Initiative Award (x3) for exceptional performance, agility, initiative and teamwork capabilities