Tirth Shah

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EDUCATION

Texas A&M University   **Aug 2024 – May 2026**
Master of Science in Management Information Systems |GPA: 3.83/4.00   Texas, USA

Sardar Vallabhbhai Patel Institute of Technology   **Jul 2017 – Jul 2021**
Bachelor of Engineering (BE) in Computer Engineering |GPA: 3.95/4.00   Gujarat, India

WORK EXPERIENCE

Utilities and Energy Services   **May 2025 – Present**
Graduate Assistant – Data & Automation Engineer   Texas, USA
- Orchestrated Python ETL to consolidate daily energy, weather, and 50,000+ sensor feeds from 15 heterogeneous sources (PDF, CSV, SQL) into structured SQL powering Power BI dashboards, with schema validation, cutting manual work 95% and saving 300+ hours per year
- Designed a production-grade day-ahead forecasting workflow for ERCOT, integrating price feeds, weather horizons, and solar generation with Selenium, pandas, openpyxl and QA controls, increasing forecast accuracy by 30% and supporting daily cost optimization by 20%
- Digitized ATMOS billing service with an OCR pipeline (pytesseract, pandas, openpyxl) published a YoY dashboard for leadership, achieving 97% OCR accuracy, cutting processing time from 2hrs to 6m, eliminating manual entry and flagging 3% of billing outliers for review/action

Black Tie Concierge LLC   **May 2025 – Aug 2025**
AI & Data Intern – Digital Product Strategy   Texas, USA
- Developed an end-to-end luxury travel platform (Next.js, TypeScript, Supabase on Vercel with CI/CD; Stripe, Google Maps & Resend API) that generated $10K+ revenue, and 3× traffic growth, and 150+ leads in 3 months, reinforced by SEO/GEO pages and instant-quotes
- Automated post-booking with low-code (n8n, Apps Script, JotForm) & python, send confirmation email on booking, issue receipt (auto bill #), add calendar invite, auto-assign driver & sync, 30-min reminder; cut cycle time 2hrs to under 1m, reduced ~90% communication errors
- Built scalable database in Supabase for users, rides, and payments; with real-time ingest & history archiving, cutting data hunt time ~80%

Tata Consultancy Services (Equifax)   **Aug 2021 – Aug 2024**
Data Engineer   Gujarat, India
- Modernized 60+ legacy SAS jobs into Python scripts (pandas/NumPy, multiprocessing) reducing runtime 80% and compute cost 50%
- Replaced 15+ excel reports with interactive dashboards using Python reducing errors by 90% & boosting data-driven decisions by 15%
- Implemented QA with a Python validation script (pandas + openpyxl/pywin32, VBA macros) that compared SAS vs. Python outputs and flagged outliers and produced audit reports, eliminating ~90% manual checks and compressing test cycles from 3 days to 2 hours
- Migrated On-Prem credit workflows to GCP (BigQuery), building a data-fabric that unified 7 external data aggregators with PII/Address standardization, match-key dedupe; increased hit ratio 45% and reduced lookup turnaround 93% by eliminating cross-aggregator fetches
- Standardized heterogeneous client files via a GCP ETL jobs (clean PII, address/ZIP normalization, deterministic dedupe) into canonical schemas, enabling reliable matching at scale and increasing hit rate by 45% while reducing inquiry turnaround 93%

Alphaa AI   **Nov 2020 – Feb 2021**
Data Visualization Analyst Intern   Gujarat, India
- Engineered revenue-forecasting & scenario dashboards to tackle uncertain demand/pricing, combining time-series models + Monte-Carlo simulations (10000+) in Python/Excel to stress-test levers, delivering +40% YoY revenue profit for a major U.S. superstore – (Youtube)
- Augmented sales using sentiment-tagged scoring & Excel insights dashboard from a prebuilt dataset to increase 30% user conversion rate
- Created an Excel sports analytics dashboard from historical game logs (pivot table + macros) to pinpoint weak zones and high-leverage lineups, raising points-per-possession by 8% and cutting scouting prep time 35% across a 20-game sample, driving game-day decision

PROJECTS

CHAT-C.P.T. | [Demo] : An agentic AI solution made using RAG, LangChain, FastAPI, and Streamlit to simplify semester degree planning for prospective students using 24/7 personalized chatbot (context retrieved) with scalable & secure infrastructure along with guardrails embedding

E-Commerce Sales Data Analysis: Developed a database solution using SQL and python by hosting a database on AWS EC2 instance using concepts of Views, Triggers, and Stored Procedures and analyzed using MongoDB, increasing efficiency by 30% compared to a standalone system

Market Basket Analysis | [Article] : leveraged Machine Learning models to understand customer expenditure traits & patterns over different financial quarters & seasonal occasions. Incorporated association & linking for product paring & positioned the sales to grow by 30% YoY

TECHNICAL SKILL & CERTIFICATIONS

Technologies: Python, SQL, TypeScript/JS, Java, Bash, Supabase; Postgres/MySQL/SQL Server; BigQuery/Redshift/Snowflake; AWS, GCP, Azure
Tools: Airflow, dbt, Kafka; Docker, Kubernetes; GitHub Actions (CI/CD), Serverless/Vercel; Stripe, n8n; Power BI, Excel/VBA, GitHub, Tableau
AI/ML: LLMs (prompting/RAG/MCP), time-series, feature engineering, model evaluation (AUC/MAE/MAPE), AutoML, XGBoost, Regression
Certification: Microsoft Azure Associate - Data [DP-203], Administrator [AZ-104], Fundamentals - [DP-900],[AI-900], Scrum Master [PSM 1]

LEADERSHIP & ACHIEVEMENT

- President, Buddy Connect @TAMU: Led industry speaker series and resume review for incoming batch, driving high impact networking
- IGSA, @TAMU: Co-ordinated 20+ cultural events reaching 10000+ students, driving community engagement through teamwork and service
- Awarded with TCS Special Initiative Award (x3) for exceptional leadership, performance, agility, initiative and team working capabilities