Tirth Shah

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EDUCATION

Texas A&M University, College Station, Texas	**Aug 2024 – May 2026**
Master of Science in Management Information Systems	GPA: 3.83/4.00
Sardar Vallabhbhai Patel Institute of Technology, Gujarat	**Jul 2017 – Jul 2021**
Bachelor of Engineering (BE) in Computer Engineering	GPA: 3.95/4.00

WORK EXPERIENCE

Utilities and Energy Services   **May 2025 – Present**
Graduate Assistant – Data & Automation Engineer
- Orchestrated Python ETL for daily energy, weather, and 50,000+ real time sensor feeds from 15 heterogeneous sources into structured SQL **automating Power BI reporting**, with schema validation, reduced manual work 95% and saving 300+ hrs./year
- Designed a week-ahead **forecast** workflow **automation** for integrating ERCOT market price, weather, and solar generation with selenium, pandas, openpyxl, increasing forecast accuracy by 30% and supporting cost optimization by 20% annually
- Digitized billing through an **OCR** pipeline (pytesseract, pandas, openpyxl) and published a YoY dashboard, reaching 97% accuracy, shortening processing from 2 hours to 6 minutes, removing manual entry, & flagging 3% of billing outliers for review

Black Tie Concierge LLC   **May 2025 – Aug 2025**
AI & Data Intern – Digital Product Strategy
- Developed a luxury travel platform (Next.js, TypeScript, Supabase; Stripe, Google Maps & Resend API) that generated $10K+ revenue, & 3× traffic growth, and 150+ leads in 3 months, reinforced by **SEO/GEO** strategies & instant-quotes generation
- Automated the post-booking pipeline using AI(**NLP**) + low-code(**n8n**): confirmation on booking, receipt on payment (auto bill #), calendar invite and auto driver assignment—shrinking cycle time by <1 minute & cutting communication errors by ~90%
- Built scalable database for users, rides, & payments; with **real-time ingest & data archiving**, optimizing data hunt time ~80%

Tata Consultancy Services (Equifax)   **Aug 2021 – Aug 2024**
Data Engineer (POC Lead)
- Modernized 60+ legacy **SAS** Code to **Python** Scripts (pandas/NumPy, I/O, and **multiprocessing**), added standardized configuration, and logging, cutting runtime 80%, compute cost 50%, and tripling peak-hour throughput while meeting SLAs
- Replaced 15+ excel report with **interactive dashboards** reducing errors by 90% and boosting data-driven decisions by 15%
- Implemented **QA with Python validation script** (pandas, openpyxl/pywin32) 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 hrs

Migration Analyst
- Migrated On-Prem workflows to GCP, building data-fabric that unified 7 external data aggregators with address standardization, match-key dedupe; increased hit ratio by 45% and reduced lookup by 93% eliminating cross-table travels
- Standardized heterogeneous client files via a **GCP ETL** jobs (clean PII, address/ZIP normalization, dedupe) into canonical schemas, enabling reliable matching at scale and increasing hit rate by 45% while reducing inquiry turnaround 93% time
- Collaborated with **cross-functional teams** to align AI and Data strategy with **business goals**, improving client data quality

PROJECTS

Document Classifier|[Github]**|**[Video]: Multi-modal AI classifier using Claude Haiku 3.5 and Gemini Flash 2.0 with dynamic prompt trees to classify 100+ regulatory documents at 98% accuracy across 4 sensitivity levels with PII detection, HITL and audit citations

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 with scalable and secure infrastructure along with guardrails

Market Basket Analysis|[Article]**:** Built an EC2 data platform (MariaDB/MongoDB; SQL views/triggers/stored procedure) and applied ML model to expose customer spend patterns and product pairing, improving efficiency 30% and lifting sales 30% YoY

Exploratory Data Analytics|[GitHub]**|**[Video]: Created dashboards to support data-driven decisions, predicting product sales and strategically targeting a 20% revenue increase by translating complex data into actionable business insights using Microsoft Excel

TECHNICAL SKILL & CERTIFICATIONS

Technologies: Python, C, SQL, TypeScript/JS, Java, Bash; Postgres/MySQL/SQL Server; BigQuery/Snowflake; AWS, GCP, Azure
Tools: Airflow, dbt, Kafka; Docker, Kubernetes; GitHub Actions (CI/CD), Serverless; Power BI, Excel, GitHub, Tableau, Fast API
Certification: Microsoft Azure Associate [DP-203],[AZ-104], Fundamentals [DP-900],[AI-900], Professional Scrum Master [PSM 1]

LEADERSHIP & ACHIEVEMENT

- President, Buddy Connect @TAMU: Led industry speaker and resume sessions for students, driving impactful networking
- IGSA @TAMU: Coordinated 20+ cultural events reaching 10000+ student, driving community engagement by teamwork