RUTUL PATEL

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EDUCATION

- **Texas A&M University**   College Station, TX
  Master of Science in Data Science   *2025 – 2027*
  - Relevant Coursework: Data Mining and Analysis, Mathematics for Data Science (Computational Linear Algebra)

- **Ahmedabad University**   Ahmedabad, India
  Bachelor of Technology in Computer Science and Engineering   *2021 – 2025*
  - Relevant Coursework: Data Structures & Algorithms, Computer Vision, Reinforcement Learning, Probability & Statistics, Linear Algebra

EXPERIENCE

- **Conversight AI**   Ahmedabad, India
  Data Engineer   *Jan 2025 – Jul 2025*
  - Built scalable ETL pipelines using Python, SQL and Apache Spark, reducing data ingestion latency by 50% while processing terabytes of structured and unstructured data daily.
  - Designed and optimized a cloud data lake and data warehouse architecture on AWS S3 and Redshift, improving query performance by 30% and enabling self-service analytics across multiple teams.
  - Implemented automated data quality checks, lineage tracking and monitoring dashboards, ensuring 99% data accuracy and supporting machine learning and analytics use cases.

- **Techsture Technologies Pvt. Ltd.**   Ahmedabad, India
  Data Scientist Intern   *May 2024 – Oct 2024*
  - Developed and deployed a C V2X communication framework that reduced handshake latency by 40% while ensuring reliable message exchange between Onboard Units and Roadside Units.
  - Created a computer vision–based hazard detection system that achieved over 95% accuracy and decreased false positives by 30%, delivering timely alerts to drivers in real-world scenarios.
  - Automated logging, debugging and API documentation processes, improving system uptime by 20% and easing future integration tasks.

- **MICxN Lab, Ahmedabad University**   Ahmedabad, India
  Undergraduate Thesis Scholar   *Jan 2024 – May 2025*
  - Designed a reinforcement learning–based intersection manager in PTV Vissim, increasing simulated traffic throughput by 25% and reducing average wait times by 20%.
  - Executed more than 50 experiments for parameter tuning and reward shaping using Python and statistical tools, boosting model efficiency by 15%.
  - Mentored five undergraduate researchers on reinforcement learning and simulation techniques, resulting in two co-authored conference papers.

PROJECTS

- **Predicting mmWave Blockage with CNN–LSTM**   PyTorch, Python, Computer Vision
  - Developed a hybrid CNN–LSTM model to predict mmWave blockages one second ahead from sequential RGB frames, improving prediction accuracy by 20% compared to baseline methods.
  - Enhanced low-light images using MIRNet, increasing object visibility and reducing detection error rates by 15%.

- **Accessible Social Media Platform**   Django, HuggingFace, PyTorch
  - Designed and launched an accessible social media platform for visually impaired users, integrating text-to-speech and image-to-speech models to process more than 10,000 posts with 90% positive feedback from beta testers.
  - Implemented secure authentication, RESTful APIs and CI/CD pipelines, reducing deployment time by 40% and ensuring robust, scalable cloud deployment.

TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, R, Java, Scala, C++, MATLAB, Bash
- **Frameworks:** TensorFlow, PyTorch, Keras, Scikit-learn, HuggingFace, Django,
- **Data Engineering & Big Data:** PostgreSQL, MySQL, MongoDB, Apache Spark, PySpark, Hadoop, Kafka, Flink, Airflow, dbt, Databricks, Snowflake, Redshift, BigQuery
- **Cloud & DevOps:** AWS (S3, EC2, RDS, Lambda, Glue), GCP (BigQuery, Dataflow), Azure Synapse, Docker, Kubernetes, Terraform, Git, Linux, CI/CD