SWATHI POKURI

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Education

Stevens Institute of Technology Sep 2024 – Dec 2025
Master of Science in Data Science Hoboken, NJ
- Relevant Coursework: Optimization, Time Series Analysis, Statistical Modeling, Machine Learning, Deep Learning, Generative AI Systems

Chaitanya Bharathi Institute of Technology Sep 2020 – Aug 2024
Bachelor of Engineering in Electronics and Communication Engineering Hyderabad, India
- Relevant Coursework: Probability and Random Processes, Signals and Systems, Digital Signal Processing, Data Structures, Computer Networks, Database Systems, Machine Learning Fundamentals.

Experience

Datum Cybertech Pvt. Ltd.(Alithya Partner) Feb 2024 – May 2024
Data Analyst (Power BI Intern) Hyderabad, India
- Developed SQL-driven analytical models and KPI systems for operational and risk reporting across consulting engagements.
- Built data pipelines and DAX models to analyze performance trends, outliers, and anomalies in large datasets.
- Designed 25+ analytical reporting and monitoring systems used by internal teams and clients to track key business and operational metrics.
- Supported 3–4 concurrent reporting workflows by delivering quantitative insights to consultants and stakeholders.
- Cleaned, validated, and transformed 100k+ records to ensure data quality and analytical reliability.
- Documented data models and metric definitions to ensure consistency and auditability across reports.

Ashbik Technology Pvt. Ltd. Jan 2023 – Jan 2024
Data & Product Analyst Bangalore, India
- Evaluated LLM outputs for accuracy, consistency, hallucination risk, and business relevance for enterprise analytics use cases.
- Built Python-based automation pipelines to evaluate prompts and analyze latency, cost, and response quality for production AI workflows.
- Designed and maintained 12+ analytics dashboards analyzing user behavior, service demand, and operational performance.
- Defined 15–20 core KPIs and analyzed large-scale transactional data to identify trends, anomalies, and product insights.
- Collaborated with product managers, engineers, and UX teams to translate business questions into measurable, data-driven solutions.

National Small Industries Corporation (NSIC) Sep 2022 – Dec 2022
Embedded Systems & IoT Intern Hyderabad, India
- Collected and analyzed real-time sensor data from industrial equipment.
- Processed multivariate time-series data to monitor system behavior and detect abnormal patterns.
- Built Python pipelines to clean, transform, and visualize streaming machine data.
- Supported early-stage predictive maintenance and performance monitoring for connected devices.

Academic & Research Projects

LLM Evaluation & Retrieval-Augmented Generation (RAG) System Aug 2025 – Dec 2025
Enterprise Generative AI & Model Validation
- Designed an LLM evaluation framework to assess accuracy, consistency, latency, and hallucination risk for business prompts.
- Integrated LLMs with vector-based retrieval to enable RAG over structured and unstructured enterprise data.
- Built Python pipelines to automate prompt testing and benchmark model quality, latency, and cost.

Causal Impact & Uplift Modeling for Decision Making Jan 2025 – Apr 2025
Counterfactual Inference & Statistical Decision Science
- Built causal impact and uplift models to estimate the true effect of product and business interventions.
- Applied counterfactual inference to separate correlation from causation in observational data.
- Quantified outcome uncertainty to support decision-making under risk.

Time-Series Forecasting & Predictive Maintenance on Multivariate Sensor Data May 2024 – Aug 2024
Industrial Digital Twin & Risk Modeling
- Modeled machine health using multivariate time-series and anomaly detection techniques.
- Estimated failure probability and remaining useful life (RUL) from historical and real-time sensor data.
- Built forecasting and classification models to support maintenance decisions under uncertainty.

Skills

Programming: Python, SQL, C++, R
Machine Learning: Regression, Classification, Clustering, Anomaly Detection, Forecasting, Causal Inference
Time-Series: Multivariate Time-Series, RUL Estimation, Predictive Maintenance
Deep Learning: Neural Networks, RNNs, LSTMs, CNNs, Transformers
Generative AI & LLMs: LLM Evaluation, Prompt Engineering, RAG, Vector Databases
MLOps & Deployment: Docker, Kubernetes, Model Monitoring, Data Drift Detection
Data Engineering: ETL Pipelines, Apache Spark, Data Validation
Visualization & Apps: Streamlit, Power BI
Cloud & Tools: AWS, Git