Ishank Gupta

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EDUCATION

Texas A&M University, College Station, TX   Aug 2021 - May 2023
MS in Industrial Engineering (Specilization in <u>Data Science</u>), Outstanding master's Student Award   GPA: 4.0/4.0

Manipal Institute of Technology, Manipal, India   Aug 2016 - May 2020
Bachelor of Technology in Mechanical Engineering   GPA: 8.65/10

TECHNICAL SKILLS

Languages:	Python, SQL (MS SQL, Postgres, Big Query), R, Spark, Matlab, CSS, HTML, JavaScript
Machine Learning:	Supervised & Unsupervised ML algorithms, Scikit-learn, Pandas, NumPy, SciPy, Pytorch, Pycaret
Tools:	Microsoft Excel (VBA), PowerBI, Tableau, AgenaRisk, Jupyter Notebooks, Google Collab, Git, Looke Studio, MS Visio
Other Skills:	Data Analysis, Data Wrangling, Data Visualization, Data Warehousing, Statistical Analysis, Linear Programming, ETL, Statistical Process Control, Optimization, A/B Testing, Time Series Analysis, Risk Analysis
Cerifications:	<u>Microsoft: Power BI Analyst Associate</u>, Data Science Nanodegree-Udacity, <u>Micromaster's in Supply Chain, MITX</u>

PROFESSIONAL EXPERIENCE

Business Architect Intern, TadaNow - Peoria, IL (Remote)   June 2022 - Dec 2022
- Leveraged data analysis to enhance supply chain visibility by understanding business requirements and unlocking valuable insights.
- Engineered a robust ETL process to extract data from SAP, Acquilla, Excel, and other sources. Conducted thorough data cleaning, quality checks, and transformations using SQL and developed data models for final solution implementation.
- Developed solutions & dynamic dashboards with advanced capabilities, enhancing visibility and tracking of clients' $10M+ inventory. Implemented a detailed "clean-to-build" plan to reduce shortages and optimize inventory. Utilized by a 40+ member client's team for production planning, inventory monitoring, and other functions, replacing previous systems.
- Main Solutions Built: Clean to Build, Inventory Grief, Inventory Disposition, Expedites Tracker, ABCD metrics, Can Build Reports.
- Researched Prospective client's financials and supply chain health, delivering impactful data analysis reports to senior leaders.
- Skills Used: Data Modeling, Supply-chain design, Data Analysis, Data Visualization, Data Validation, SQL, Excel, Python, Tada's Inbuilt Tools, Deployment Documentation.

Vehicle Inspection Intern, Maruti Suzuki Ltd – Gurgaon, India   May 2019 - July 2019
- Analyzed Defects data from dealers across India, Implemented Quality improvement methods to monitor & control PDI defects.
- Aided in continuous improvement activities of Assembly team, Update S&OP's & Designed Defects Training Manual.
- Identified Root cause using 5 Whys & Ishikawa diagrams. Drived a reduction of 11% in defects in the "EECO" vehicle model.

PROJECTS

Data Science Capstone with Texas A&M Forest Services (Project Link) (Tableau)   Aug 2022 – Dec 2022
- Scraped, cleaned and Analyzed Forest Inventory Database & Historical Fire-sites dataset (1.4M+ records), Used Kriging & IDF methods to interpolate weather parameters (5M+ records each year, 25 years) from 232 ASOS weather-stations at fire-sites.
- Built a machine learning classificaion model to predict fire size class using initial weather data. Applied Class Imbalance methods and selected random forest & ensemble (voting) method using stratified k-fold as final model with improved final accuracy of 59%.
- Utlized an optimization model to determine the optimal number and locations of new fire stations. Communicated key findings to maximize fire response efficiency, prioritizing high-risk zones to achieve a response time of within 6 minutes.
- To improve wildfire response, applied time-series analysis (ARIMA, SARIMA) to forecast fire size & fire frequency for each month.

Supplier Risk Management using Bayesian Network Analysis using Agena Risk & Python (Project Link)   Oct 2022 - Dec 2022
- Led a team of 4 to develop a Bayesian Network-based Supplier Evaluation and Disruption Probability Calculator. Identified the best supplier based on predefined standards by considering factors such as external risk, resilience, financial risk, and network risk.

Cost Optimization of Middle Mile Logistics Using AMPL (Project Link)   Oct 2022 - Dec 2022
- Developed a mixed integer linear programming model with 18+ parameters, 4 Decision Variables and 15+ constraints (operator's availability, product incompatibility, type & number of vehicles, loading/unloading capacity at centers etc).
- Conducted multiple sensitivity analyses (What-if questions) on the model for Computational efficiency (Decreased the computation time by 16.5%), Route Incompatibility, and Cost analysis based on additional restrictions imposed by client.

Anomaly Detection (Phase-1 for Statistical Quality Control) (Project Link)   Feb 2022 - May 2022
- Using PCA reduced 209 parameters to 4 parameters, Identified out-of-control points through Hotelling T^2, m-CUSUM chart, m-EWMA chart. Identified control limits for future monitoring using multiple univariate analyses & multivariate analyses.

Capacitated Vehicle Routing Problem Using Python & SIMIO (Project Link)   Sep 2021- Dec 2021
- Developed Multi-objective Optimization model to Identify optimum delivery routes with minimum expected transportation costs and total stockouts using Gurobi solver (Mixed Integer Linear Programming) and Wright Clark saving method (Heuristic Method).
- Used CRN & simulations to identify Optimum Route. Devised Meta-experiments to observe the impact of uncontrollable factors.

ACADEMIC AWARDS & LEADERSHIP

- Received Top Student Award (Highest percetage/GPA in MS-program) & ISEN-department Scholarship for Academic Performance.
- Teaching Assistant (STAT-303): Coordinated with 3 TAs, conducted 4 office hours & 1 Recitation lecture weekly for 200+ students.