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San Marcos, Texas, USA

Summary

- MS Industrial Engineering candidate (**4.00/4.00 GPA**) with ~2 years of supply chain planning experience at Unilever and Bengal Group; deep in optimization (Python, Gurobi, AMPL), SAP, and S&OP/MPS/MRP/DRP.
- Measurable operational impact: automation cutting reporting time **78%**, dispatch rate lifted **92.3% → 98.2%**, a **158%** demand surge absorbed over 3 consecutive months.
- Published researcher in AI + supply chain analytics; selected into Unilever's ULIP from **4,500+** applicants (top 0.2%); Graduate Merit Fellowship at Texas State University.

Skills

Optimization Methods: Linear & mixed-integer programming (LP/MILP), second-order cone & convex programming (SOCP), nonlinear & nonconvex optimization, network flow & facility location, Benders decomposition, Lagrangian relaxation, subgradient methods, queueing models, heuristics

Optimization & Analytics: Python (pandas, NumPy), Gurobi, AMPL, OR-Tools, R, SQL, VBA, Arena

BI & Automation: Power BI, Tableau, Advanced Excel (PivotTables, Power Pivot), Power Automate; agentic AI automation (Claude Code)

ERP & Planning Systems: SAP (PP/MM — BOM, MRP, production versions), Kinaxis RapidResponse

Planning: S&OP, Master Production Scheduling (MPS), Material Requirements Planning (MRP), Distribution Requirements Planning (DRP), Demand Forecasting

Tools: GitHub, $\LaTeX$, ArcGIS, Draw.io

Professional Experience

Graduate Research & Instructional Assistant

Aug 2025 – Present

Texas State University, San Marcos, Texas

- Building large-scale **mixed-integer nonlinear** optimization models (Python/Gurobi) for resilient, nationwide **data-center network design** — multi-period facility location, modular capacity, and continuous routing under demand growth and power constraints.
- Applied a **second-order cone (SOCP)** reformulation to a nonconvex processor-sharing **queueing-delay** constraint; developing **Benders decomposition** and **Lagrangian relaxation** (subgradient bounds, primal repair) solution frameworks for large instances.
- Facilitate graduate **Supply Chain**, **Operations Research**, and **Facility Location** courses: grading, office hours, and student support.

Supply Chain Planning Officer — Nutrition

Jun 2023 – Aug 2024

Unilever Consumer Care Limited, Dhaka, Bangladesh

- Led daily **MPS** across 3 plants; aligned plans with capacity (OEE) and inventory strategy to drive executable schedules and faster decisions.
- Built Python, Power Automate, and SAP-scripting automations; cut reporting time **90 → 20 min (–78%)**, saving **~5.8 hr/week**; authored SAP **VBA** utilities (FG PO creation, TECO, day-wise RM/PM breakdown with coverage computation).
- Raised **Dispatch Rate** from **92.3% to 98.2%** by creating the cross-depot **"Nutrition O2B Support"** system and tightening planner/DRP coordination.
- Supported a **158%** demand upsurge for Knorr over 3 consecutive months by securing uninterrupted RM/PM flow with procurement, DRP, and regional suppliers.
- Developed automated **MRP** checks (RM requirements vs. orders/shipments) and instant plan-vs-coverage views, improving DOH control and exception responsiveness.
- Avoided raw/packaging material write-offs by defining FG/RM/PM stock norms, managing expiries, and coordinating extensions with **R&D** and **Quality**.
- Rebuilt master data and multi-level **BOMs** for **45+ SKUs**; enabled **alternate BOMs** via production versions to increase resilience during demand and supply shifts.
- Launched/relaunched **4 SKUs** (incl. BSTI compliance) with full stakeholder alignment and **OTIF** delivery.

Unilever Leadership Internship Program (ULIP) — Supply Chain

Sep 2022 – Dec 2022

Unilever Bangladesh Limited, Dhaka, Bangladesh

- Selected via a 4-stage process from **4,500+** applicants nationwide (top 0.2%).

- Built a VBA production-planning tool (“NTPP”), reducing manual steps and errors; restructured Forecast Accuracy/Bias reporting with automation, improving speed and decision quality.

Supply Chain Intern

Jun 2022 – Sep 2022

Bengal Group of Industries, Dhaka, Bangladesh

- Developed an **Excel-based MRP dashboard** for **4** business units to streamline material flow and standardize coverage/shortage reviews.
- Optimized the Comparative Statement process by restructuring **1,400+** files; built an interactive **Power BI** dashboard for supplier, price, and lead-time search, accelerating sourcing decisions.

Education

Master of Science in Industrial Engineering

Aug 2025 – May 2027 (exp.)

Texas State University, San Marcos, Texas

CGPA: **4.00/4.00**

- Thesis: resilient data-center network design (optimization). Key coursework: Applied Operations Research, Advanced & Nonlinear Optimization, Manufacturing Systems Modeling, Advanced Quality Control. Member, **INFORMS**.

Bachelor of Science in Industrial & Production Engineering

Feb 2017 – Apr 2022

Khulna University of Engineering & Technology (KUET), Bangladesh

CGPA: **3.65/4.00** (3.78 last 4 semesters)

Selected Projects

- **Airplane Boarding Optimization** (2025) — nonlinear model minimizing aircraft turnaround time; **Gurobi, AMPL, Python**.
- **Amazon Logistics Analytics** (2025) — predictive regression on delivery data; identified and quantified key latency drivers to improve lead-time visibility; **Python**.
- **Vehicle Routing Optimization — Thesis** (2022) — solved a distributor’s CVRP with heuristics (Nearest Neighbor, Sweep, Clarke–Wright) and **OR-Tools**; recommended a deployable routing policy.
- **Automated MPS/Execution Analytics — Unilever** (2023–2024) — automated KPI pipelines (coverage, capacity adherence, plan vs. actual) via Python/SAP/VBA.

Publications

- Application of AI in reverse logistics: A bibliometric and network analysis — *Supply Chain Analytics* (2024); *Towards sustainable AI: A comprehensive framework for Green AI* — *Discover Sustainability* (2024); AI/ML in combating COVID-19 (under review). [Google Scholar profile](#).

Certifications

Optimization 301 for Data Scientists — Gurobi Optimization

Dec 2025

Product Management Bootcamp — HDNB

May 2025

Excel Skills for Business Specialization — Coursera

Aug 2020

Honors & Awards

- Graduate Merit Fellowship — Texas State University (2025); Dean’s List & 4-year Technical Scholarship — KUET.
- ISCEA PTAK Prize Case Competition — 60% Scholarship (2021); Top-10 Finalist — SCA Upstream Case Competition (2020).

Volunteer & Co-Curricular

- **Level-7 Local Guide** — [Google Maps](#): 1,711 contributions, **2.2M** views.
- Senior Executive & Instructor — IEM Robotics & CAD Club, KUET: ran AutoCAD/SolidWorks and programming workshops.
- **Freelancer (Level 1)** — [Fiverr](#): 20+ projects in Excel automation, forecasting, and MRP (5× ratings).