Karthick Narayanen Murugan

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Summary

Senior Data Scientist with 5+ years of end-to-end ownership across **forecast, sales, inventory, and backorder analytics** for a global $800M supply chain. Combines deep ML and statistical modeling expertise with hands on S&OP leadership to translate complex data into decisions that move the business. Proven ability to independently architect and ship production-grade AI tools, automated pipelines, and BI platforms actively used by cross-functional stakeholders from planners to C-suite.

Core Competencies

- **Data Science & ML:** Time Series Forecasting, Machine Learning, Statistical Modeling, DSX, SO99+
- **Programming & Analytics:** SQL, Python, R, LINGO
- **Visualization & BI:** Power BI, Tableau, Streamlit, Copilot Studio, Advanced Excel
- **Supply Chain Domains:** Demand Forecasting, Inventory Optimization, Backorder Management, Global SIOP
- **ERP & Planning Systems:** D365, SAP, JDA, Oracle, Salesforce
- **Cloud & Data Platforms:** Azure, Snowflake, AWS, IBM Cloud
- **Certifications:** Six Sigma Green Belt, PL-300 (Power BI), Tableau Desktop, Google Data Analytics

Experience

Dometic Corporation Chicago, Illinois
Senior Data Scientist, Supply Chain *Jun 2022 – Present*

- Independently owned end-to-end data science across forecast, sales, inventory, and backorder domains for an **$800M global business** spanning 6,000+ SKUs across Americas, EU, and APAC, contributing to a **12%** reduction in supply chain costs and **$15M+** in annual revenue growth.
- Architected and deployed a **RAG based AI agent** integrated with Power BI via Copilot Studio, enabling natural language Q&A over live forecast, inventory, and backorder data, cutting ad hoc turnaround by **40%** and enabling self-service analytics across teams.
- Built production grade **ML demand forecasting models** (time series, regression, ensemble) that improved forecast accuracy by **15%**, paired with automated MAPE/WMAPE exception pipelines delivering daily bias alerts to planners.
- Developed an interactive **What-If scenario planning tool** in Power BI and Streamlit enabling Sales, Finance, and Operations to model demand scenarios and supply constraints, accelerating monthly S&OP consensus.
- Automated **6+** reporting pipelines including daily forecast emails, item master change alerts, PIPO tracking, and SoS date monitoring, eliminating manual effort and enabling faster root cause analysis on demand shifts.
- Designed Power BI dashboards for KPI, forecast performance, and inventory health tracking, improving decision making speed by **25%** across Sales, Supply Chain, and Finance.
- Drove the S&OP demand review process end-to-end, partnering with Sales, Operations, and Finance leadership to align on consensus forecast, resolve supply-demand gaps, and present recommendations to C-suite.
- Managed demand planning for 38+ new product launches and promotions, maintaining **98%** product availability with a **20%** reduction in stockouts and **15%** cut in excess inventory.

Energy Resources Center, UIC Chicago, Illinois
Energy Data Analyst (Internship) *Feb 2021 – Mar 2022*

- Delivered energy efficiency projects that saved over **$620K** and reduced consumption by **2.5M** kilowatt-hours within six months.
- Identified efficiency opportunities with **$1.4M** savings potential and an 8M kilowatt-hour reduction across industrial and residential facilities.
- Built Power BI dashboards to visualize energy consumption and cost savings, and estimated payback periods using Salesforce and SAP.

Delphi TVS India
Supply Chain Analyst *May 2020 – Dec 2020*

- Reduced out-of-stock occurrences by **30%** through data-driven safety stock analysis and periodic level reviews.
- Optimized purchasing decisions to reduce delivery costs by **15%** through strategic ordering aligned with forecasted demand.
- Enhanced supplier performance by resolving lead time, fill rate, and data quality issues, achieving a **25%** improvement in overall supply chain performance.
- Improved distribution center operations to achieve a **20%** cost reduction by smoothing inbound receipts and avoiding capacity exceedance.

Education

University of Illinois Chicago Chicago, Illinois
Master of Science, Industrial Engineering *Jan 2021 – May 2022* GPA: 4.0

SRM Institute of Science and Technology India
Bachelor of Science, Mechanical Engineering *Aug 2016 – May 2020* GPA: 3.86