

# ASTIN ANDREWS KOLENGADEN

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## EDUCATION

### NORTH CAROLINA STATE UNIVERSITY | Raleigh, NC, USA

**Aug 2024 – May 2026 (expected Graduation)**

*Master's in Integrated Manufacturing and Systems Engineering*

Relevant coursework: Applied Engineering Economics, Statistics using R, Design and control of Production systems, Database Applications in Industrial and Systems engineering, Supply Chain Economics & Decision making

Extracurricular: **Pack Motorsports FSAE** (Business team member)

### PSG COLLEGE OF TECHNOLOGY | Coimbatore, India

**Aug 2020 – May 2024**

*Bachelor of Technology in Mechanical Engineering*

Relevant coursework: Economics for Engineers, Operations Research, Supply Chain Management, Design for Manufacture and Assembly, Python for Analytics.

Extracurricular: **Pegasus Racing FSAE** (Brakes lead and driver)

## ESSENTIAL SKILLS

**Technical:** Power BI, SQL (Microsoft SQL Server, PostgreSQL), SAP, Microsoft Office Suite (Excel, PowerPoint, Word), Microsoft Project, Smartsheet, Visio, Python, Minitab, Tableau, R

**Key Concepts:** Demand Forecasting, Inventory Management and Lead Time Reduction, Risk Management, Production and Capacity Planning, Root Cause Analysis, Scrum Management Methodologies, Reports and presentation (KPIs, procurement activities) MRP, ERP, Just-In-Time (JIT) Methodology, Process Improvement

**Certifications:** Lean Six Sigma Green Belt, Yellow Belt & White Belt - CSSC, Digital Supply Chain Twins using anyLogistix – IIM (Mumbai)

## PROFESSIONAL EXPERIENCE

### AKG of America – Continuous Improvement Project Intern

**Aug 2025 – Present**

- Developing process visibility tools and leading a Value Stream Mapping (VSM) initiative using *Video Timer Pro* to capture real-time cycle data across *turbulator stamping, trimming, assembly, and CAB brazing*, identifying **10–15%** cycle-time reduction opportunities.
- Performing PFMEA and capability studies to mitigate high-risk failure modes in brazing and assembly operations, reducing rework frequency and enhancing process consistency
- Redesigning Kanban replenishment logic in *SAP ERP* and *Excel VBA*, optimizing bin-sizing and trigger points to enable **20%** faster material flow and cutting line shortages.
- Serving as a cross-functional liaison between production, quality, and procurement to align takt time with supplier schedules, cutting unplanned downtime by **15%** and improving schedule adherence.

### Operations Analyst (Graduate Assistant) – North Carolina State University Housing

**May 2025 – Present**

- Developed and maintained asset management dashboards in *Power BI* and *Excel VBA*, enabling real-time visibility of 2,000+ facility assets and improving preventive maintenance scheduling accuracy by **30%**.
- Analyzed maintenance work order trends using *SAP ERP* data to identify bottlenecks and optimize technician dispatching, reducing delayed work orders by **18%**.
- Led space utilization optimization for housing relocations involving 10,000+ residents, applying Lean layout principles to cut setup time by **20%**.
- Standardized reporting and visual management systems across 25+ facilities, reducing administrative errors and improving compliance efficiency.

### Analyst Intern – Craftsman Automation Ltd.

**Jan 2024 – Aug 2024**

- Analyzed component demand forecasts and raw material requirements using *SAP ERP* and *Power Query*, identifying planning gaps that helped balance supply with machining capacity.
- Consolidated and analyzed supplier data from *SAP ERP* to evaluate lead time variability, price trends, and defect ratios, driving supplier rationalization that produced **3%** cost reduction.
- Mapped process and material flow using VSM and FMEA, identifying cross-departmental delays that increased throughput by **15%** after corrective scheduling actions.

## RELEVANT PROJECTS

### Semiconductor Manufacturing Optimization (Python, R, Simulation)

**Aug 2024 – Dec 2024**

- Built a predictive demand forecasting and capacity planning model using Python and ARIMA to align wafer production schedules with supplier delivery and inventory levels, increasing forecast accuracy by **18%**.
- Developed Power BI and Tableau dashboards to track end-to-end material flow, supplier performance, and tool utilization metrics, reducing planning delays and enabling 12% improvement in supply-demand balance.

### ChartStart – AI-Powered Go-To-Market Strategy Platform (Ongoing)

**Aug 2025 – Present**

- Designing an interactive planning tool that connects demand forecasting, capacity planning, and financial KPI tracking into a unified Power BI workspace, giving early-stage teams real-time visibility into resource constraints and rollout timing.
- Using Python-based data pipelines to integrate market potential (TAM–SAM–SOM) with cost and lead-time data, helping founders prioritize scalable suppliers and identify bottlenecks before launch.