LILLIAN GILBRETH

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EDUCATION

Texas A&M University, College of Engineering   Expected: May 2026
B.S. Industrial Engineering   GPA: 3.8

EXPERIENCE

Industrial Engineering Intern, Cummins - College Station, TX   May 2024 - Present
- Improved production line throughput by 22 percent by identifying bottlenecks and redesigning workstation layouts.
- Cut unplanned downtime by 30 percent by creating a preventive maintenance schedule and tracking equipment failures in a CMMS.
- Wrote standard work instructions, updated process flow diagrams, and balanced assembly operations.
- Worked with operators, maintenance staff, and quality teams to fix recurring issues.
- Analyzed production data with Excel, Python, and Minitab to support weekly performance reviews.

Operations Research Assistant, Supply Chain Lab, Texas A&M - College Station, TX   Jan 2024 - Present
- Built simulation models in Python and SimPy to compare warehouse picking methods, identifying a layout that cut fulfillment time by 15 percent.
- Analyzed routing and inventory data and prepared visual summaries for a research symposium.
- Cleaned and organized large logistics datasets using Pandas to support ongoing research.
- Created data-checking scripts to find missing or inconsistent entries.

PROJECTS

Factory Simulation Model, Systems Simulation Course Project   Jan 2024 - Apr 2024
- Built a discrete-event simulation of a multi-step manufacturing process using Python and SimPy.
- Modeled machine downtime, repairs, and staffing schedules to test performance improvements.
- Generated automated charts and reports comparing baseline and improved system behavior.

Warehouse Optimization Challenge, Industrial & Systems Engineers Workshop   Sep 2023 – Dec 2023
- Created an optimized warehouse layout in AutoCAD to reduce travel distance.
- Reviewed barcode logs and order patterns to determine ideal product placement and cut travel time by 20 percent.
- Wrote a Python script to simulate picker routes and compare results with past performance.

Production Line Bottleneck Study, Intro to Industrial Engineering Project   Jan 2023 – Apr 2023
- Mapped a multi-stage assembly process using value stream mapping to identify bottlenecks and excessive WIP inventory.
- Tested alternative staffing plans and batch sizes using Excel simulation, reducing average cycle time by 14 percent.
- Presented findings to a panel of faculty and industry partners, demonstrating cost and impacts of proposed changes.

SKILLS

- **Design:** AutoCAD, SolidWorks, 3D Printing (FDM), Process Mapping, Facility Layout
- **Analysis:** Python (NumPy, Pandas, SciPy, SimPy), MATLAB, Minitab, R, Excel (advanced), Data Visualization