

Abdallah Barakat

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Professional Summary

Graduate Research Assistant and former Operations Manager with proven success **doubling facility capacity, cutting costs by 30%, and improving product quality**. Skilled in data-driven process optimization, machine learning, and cross-functional leadership. Pursuing a M.Sc. in Industrial & Systems Engineering to deliver measurable impact in consulting and operations management through process improvement and data-driven decision making.

Education

Youngstown State University, Ohio, USA

M.Sc., Industrial and Systems Engineering, Expected Graduation: June 2026

The American University in Cairo (AUC), Egypt

B.Sc., Mechanical Engineering, 2023

Professional Experience

Youngstown State University - Graduate Research Assistant, August 2025 - Present

- Research on **FFF metals**: build predictive ML models linking process parameters to mechanical performance; optimize settings to reduce defects and improve mechanical strength.
- Conduct DOE, data cleaning, and statistical analysis (MATLAB/Anova); document methodology and results for publication/presentations.

Dakahlia Group, Cairo, Egypt - Operations Manager, July 2023 - December 2024

- Project Manager: Led design and implementation of a 6-acre drying facility **doubling the capacity** to support ~1000 tons of raisins throughput per season, **optimizing drying area utilization by 30%** and **reducing drying time by 20%**.
 - Managed olive oil production as a product owner, **improving quality by 10%** through process optimization.
 - Supervised Medjool dates production as a product owner, **cutting operations cost by 30%**.
 - Standardized operations through SOPs and process mapping, reducing rework and improving training effectiveness.
 - Oversaw the operations of three pack houses, managing the packing and sorting of citrus, potatoes, grapes, raisins, and olives.
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ACADEMIC & TECHNICAL PROJECTS

- **Planetary Gearbox (SolidWorks)**: gear-train sizing, materials selection, bearing fits & manufacturing drawings.
 - **Manufactured Gearbox Assembly**: machined shafts, press-fit tolerances; Bill of Materials (BoM) and assembly procedure.
 - **Vehicle Prototype (CATIA)**: 3D scanning and remodeling.
 - **Optimization in MATLAB**: parameter search to improve process efficiency; sensitivity analyses.
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SKILLS

Analytics & Tools: MATLAB (optimization, machine learning), Minitab, Excel (advanced), Trello.

CAD/CAE: SolidWorks, AutoCAD, CATIA, ANSYS, ABAQUS, Adams, VXelements.

Ops/PM: SOP design, process mapping, DOE, stakeholder management, Lean Fundamentals, Process Optimization, Operations Improvement.

Leadership & Management: Team Leadership, Problem-Solving, Negotiation and Budgeting, Communication and Collaboration

Languages: English (fluent), Arabic (fluent), German (basic).