

MATTHEW DUBEA

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SUMMARY

- Mechanical Engineer with physical experience in industrial project coordination, cost tracking, and technical documentation for design chemical plant expansions.
- Hands on background in HVAC, electrical, and land survey experience across construction and petrochemical sites; support QA/QC and OSHA safety compliance.
- Proficient in SolidWorks, MS Office/Excel, PFMEA, MATLAB, Ansys Fluent (CFDs) and other processing tools to improve efficiency and reduce rework.

EDUCATION

- **University of Louisiana at Lafayette** — 2020-2025 — B.S. Mechanical Engineering, Minor in Mathematics
- **UCL & University of Cambridge, London, UK** — 2024 — Summer Study Abroad Semester.

FIELD EXPERIENCE

1. **Safelite AutoGlass**, Scott, LA — Auto Glass Technician 4/2022 – 1/2024
 - Completed 2000+ installs over 98% pass QA; conducted ADAS & LiDaR recalibrations to manufacturer specs.
2. **Ernest P. Breaux Electrical**, New Iberia, LA — Electrician / Machine Operator 2/2019 – 11/2021
 - Supported full-cycle construction of industrial substation, aligning field work to project documentation.
3. **Granger AC**, Broussard, LA — HVAC Installer 5/2018 – 12/2018
 - Installed HVAC units in over 20 commercial/industrial sites; interpreted print layouts and specs.
4. **Chicago Bridge & Iron Co.**, Plaquemines, LA — Instrument Man/Rodman 2/2017 – 4/2018
 - Surveyed equipment foundations and structural elements for Shin-Tech expansion; documented as-built records.
5. **Triad Electric & Controls**, Plaquemines, LA — Electrician Apprentice 3/2015 – 1/2017
 - Installed conduit, terminated panels, and documented QA during Shin-Tech plant expansion.

CERTIFICATIONS (* = IN PROGRESS)

- **SOLIDWORKS CAD Design Associate** — 3D modeling, basic FEA, and assemblies.
- **MathWorks MATLAB / MathWorks Machine Learning** — MATLAB and Machine Learning Course.
- **OSHA 10-Hour Safety & Health** — Emphasis on industrial safety standards.
- **FE EXAM*** — Fundamentals of Engineering: Mechanical, NCEES.
- **Lean Six Sigma Green Belt*** — Continuous improvement, waste reduction, and process control.

INVOLVEMENT

- **College of Engineering - Ambassador** — Promoted engineering study abroad and global project collaboration.
- **American Society of Mechanical Engineers (ASME)** — Participated in project design and review sessions.
- **Society of Manufacturing Engineers (SME)** — Engaged in workshops on process optimization.
- **Louisiana Engineering Society (LES)** — Member supporting ethical practice and continuing education.

PROJECTS

- **2025 – Tricycle Design & Manufacturing Project** (View Portfolio)
 - Led team to 1st place in **Acadiana 500**; managed project scope, design, and fabrication timeline.
 - Increased assembly speed by 20% via DFM and fixture redesign; cut material cost 15% through PFMEA.
 - Created production repeatability documentation and managed SolidWorks, FEA, and vendor/material sourcing.

SKILLS

- **Project & Process:** Excel, WBS, Process Flow Diagrams (PFD), PFMEA, RCA, Cost Estimating, QA/QC Logs
- **Design Tools:** SolidWorks (CAD/FEA), Fusion 360, GD&T, DFM, Ansys Fluent (CFD), MATLAB, Python
- **Field & Fabrication:** CNC Machining, 3D Printing, HVAC install, Electrical termination, Welding assembly



CSWA Certification



Portfolio GitHub Portfolio



SOLIDWORKS CSWA