

Marcel Dabek

marcel.dabek@uconn.edu • (860) 977-5806 • <https://www.linkedin.com/in/marceldabek/>

PROFESSIONAL EXPERIENCE

Engineering Intern

May 2025 – Aug 2025

Infiltrator Water Technologies, Old Saybrook

- Led efforts to in-source, optimize injection molded production from an external supplier to in-house manufacturing that supports 400,000 units.
- Engineered two new alignment cones to improve distributor assembly efficiency and safety.
- Applied DFM principles for injection molding and conducted FEA validation testing on products.
- Created drawings and set new shipping structure standards that are to be used by quality auditors.

Floor Tiler

May 2024 – Aug 2024

DBK LLC, Ceramic Tile and Floor Preparation Professional

CLUBS AND EXTRACURRICULARS

EV Powertrain Lead

Aug 2023 – Present

UConn Formula Society of Automotive Engineers

- Led the design and manufacturing of the EV powertrain by setting timelines and goals.
- Designed and manufactured electronic boxes to house critical electrical components by using Autodesk Fusion for plasma cutter programming.
- Developed and refined designs of motor mounts, differential mounts, and a powertrain plate, using ANSYS Static Structural and Topology Optimization overall reducing powertrain weight by 30%.
- Reverse engineered a Yamaha R6 output shaft to design a custom shaft for the team's electric motor by researching JIS splines and communicating with other teams within the competition.
- Used MATLAB simulation to determine chain and sprocket configuration to maximize power transfer.
- Manufactured and assembled the EV powertrain using a mill, plasma cutter, and hydraulic press.
- Identified suitable bearings for the powertrain through free body diagram force calculations.
- Coordinated with suppliers to purchase stock aluminum 6061-T6 for the powertrain assembly, negotiating costs to stay within budget constraints.

Private Pilot

June 2021 - Present

- Performed pre-flight inspections on flight controls, electrical systems, and maintenance on a single prop engine.
- Demonstrated strong problem-solving skills by addressing mock scenarios of mechanical anomalies.

EDUCATION

University of Connecticut, Storrs CT

Aug 2023 – May 2027

College of Engineering, Mechanical Engineering, 3.7 GPA

Relevant coursework: Heat Transfer, Thermodynamics I & II, Fluid Dynamics, Material Science

SKILLS

Computer Software: SolidWorks, ANSYS, Bluebeam Revu, MITCalc, RMS GUI, Microsoft Office Products

Programming Languages: Java, Python, MATLAB

Languages: English (fluent), Polish (fluent)