

David Dwyer

(214)-393-4694 | davidd22@tamu.edu |

EDUCATION

Texas A&M University

Bachelor of Science in Mechanical Engineering (Intended)

College Station, TX

Expected Graduation: May 2030

TECHNICAL SKILLS & CERTIFICATIONS

CAD / CAM Design: Onshape, Fusion 360, Computer-Aided Manufacturing (CAM), System Schematics

Fabrication & Hardware Experience: CNC Machining, 3D Printing, Carbon Fiber Layup, Aluminum Fabrication, Mechanical Systems, Hand & Power Tools

Software & Languages: Java, Python, Microsoft Office, Google Suite

Certifications: American Lifeguarding Association Lifeguard & AED/CPR Certified

ENGINEERING & HANDS-ON PROJECTS

Custom Go-Kart Fabrication | *Lead Builder & Designer*

Personal Project

- Fabricated a go-kart frame from scratch, integrating a mechanical drivetrain, electrical, steering, and safety systems
- Performed performance customizations, including carburetor/exhaust replacement, butterfly wheel integration, and custom brake/throttle assemblies
- Executed hands-on machining, assembly, alignment, and troubleshooting of structural components, reaching 50 MPH max speed (build log & CAD in portfolio)

Custom RC Car & Carbon Fiber Components | *Designer & Fabricator*

Personal Project

- Modeled complex assembly schematics in CAD (Fusion 360/Onshape) to design a modular RC vehicle framework
- Fabricated custom structural components utilizing carbon fiber layup and aluminum for optimized strength-to-weight performance

FIRST Tech Challenge Robotics

Dallas, TX

Member (2022–2024), Team Captain & Design Lead (2024–2026) – Teams 6832 & 3734

Sept 2022 – May 2026

- Led a 15-member team to Regional and State Championships by coordinating design, build, and programming sub-teams
- Engineered 3 competition robots utilizing 150+ custom 3D-printed, carbon fiber, aluminum, and plastic parts designed in CAD and manufactured via CNC machining
- Designed and released an open-source chassis architecture actively adopted by 12+ robotics teams globally
- Earned top regional engineering honors, including **1st Place Design Award** (2025, 2026), **1st Place Sustain Award**, and **2nd Place Inspire Award** for mechanical innovation, reliability, and engineering documentation
- Secured ~\$13,000 in industry sponsorships through corporate presentations to external partners like Southwest Airlines

LEADERSHIP & OPERATIONAL EXPERIENCE

Glen Cove Swim Club

Dallas, TX

Pool Technician, Shift Leader, Lifeguard

April 2025 – Present

- Inspected and repaired filtration systems, chemical balancing setups, and safety equipment, reducing facility downtime by 20%
- Supervised facility staff during daily operations, maintaining safety standards and conflict resolution under high pressure
- Awarded **Rookie Lifeguard of the Year (2025)** for exceptional leadership and team coordination

Boy Scouts of America – Troop 838

Dallas, TX

Eagle Scout Project Manager & Instructor

August 2022 – Present

- Engineered and constructed rainwater collection platforms and navigation infrastructure, managing a \$2,100+ budget and leading 25+ volunteers
- Featured in local Dallas newspaper for community infrastructure impact
- Instructed younger scouts in field safety, technical skills, and leadership development