

**What We Do**

Tayden Carter LLC delivers high-precision mechanical design and CAD services tailored for both private sector and government clients. We specialize in 3D modeling, technical drawings, prototype-ready designs, and embedded systems integration.

**Core Competencies**

- 3D CAD Modeling (SolidWorks)
- Engineering Drawing & GD&T
- Prototype-Ready Design Packages
- Mechanical component and assembly design
- Embedded Systems Integration (on request)

**Differentiators**

- U.S.-based engineering graduate-run firm
- Agile, small-business structure ensures fast turnaround and direct communication
- Proficient in SolidWorks (CSWP Certified) with 10+ years of CAD Experience
- Capability in simulation, R&D support, and prototype-ready deliverables
- Clear, direct communication and project transparency

**Experience**

- Developed a rear steering control system for an FSAE vehicle using ESP32 microcontrollers, rack-and-pinion actuation, and closed-loop PID control in C; integrated real-time feedback for adaptive steering
- Designed and manufactured a dual-carburetor adapter for a 3-71 supercharger, including CAD modeling in SolidWorks, pattern making, aluminum casting, machining to tolerance, and successful functional testing
- Performed gear ratio optimization for an overhead crane gearbox using Monte-Carlo Simulation, then modeled the spur gears and shafts in SolidWorks
- Academic and personal projects emphasizing dynamic systems, design optimization, and mechanical-electrical integration

**Company Data**

CAGE: 14ALo

UEI: URTZH8E8WKA5

NAICS Codes:

- 541330 – Engineering Services
- 541340 – Drafting Services
- 541715 – Research and Development in Physical, Engineering, and Life Sciences
- 541380 – Testing Laboratories

Business Type: Small Business

**Contact Information**

Tayden Carter – Managing Member (Primary Contact)

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