



Austin Paynter

713-280-6674

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SUMMARY OF QUALIFICATIONS

- Senior Mechanical Engineer with 20+ years' experience in mechanical design, prototyping, and testing of precision systems, including electromechanical assemblies, military-grade products, and robotics.
- Expert in SolidWorks, OnShape, with strong skills in DFM/DFA, GD&T, and tolerance stack-up analysis.
- Proven design leader in R&D environments, with extensive cross-functional collaboration and team mentoring.
- Hands-on experience with rapid prototyping, machining, 3D printing, and bringing products from concept through production and field deployment.
- Firearms systems design and small business ownership experience, with deep understanding of end-user needs, manufacturing processes, and testing.
- Military veteran (US Army/National Guard) with direct mechanical and technical leadership experience in high-pressure environments.

TECHNICAL SKILLS

SolidWorks, OnShape, GD&T, DFM/DFA, Tolerance Analysis, FEA (Static, Motion), Sheet Metal, Machined Parts, Cable Assemblies, Prototyping, Microsoft Office (Excel, Word, Project), Lean/Six Sigma, Vendor Relations, Project Management

PROFESSIONAL EXPERIENCE

SENIOR MECHANICAL ENGINEER *Pipedream Labs, Austin, TX* | 12/22 – Present

- **Lead design, prototyping, and testing** of advanced delivery systems and supporting infrastructure, integrating complex **mechanical systems, motors, and sensors** in a fast-paced robotics startup.
- Designed and deployed **industry-first Output Portal**, enabling **autonomous package handoff**, now operational at a **live customer site**.
- **Collaborated across engineering disciplines** (Industrial, Civil, Electrical, Software) to deliver fully integrated, functional systems.
- **Mentored and trained junior engineers** on mechanical design, **manufacturability, CAD standards, and prototyping**, including 3D printing and in-house machining.
- Led **design reviews and field testing**, rapidly iterating on prototypes for functional and aesthetic optimization.

MECHANICAL ENGINEER III *Energetic Materials & Products, Round Rock, TX* | 11/18 – 12/22

- Designed **precision mechanical and electromechanical systems** for military unmanned platforms and **ballistic test equipment**.
- Created and tested assemblies for high-reliability environments; **reduced production costs by over 50%** on multiple products through DFM and vendor optimization.
- Authored **technical documentation, design standards, and SolidWorks PDM systems**, improving design efficiency and product consistency.
- Managed **vendor sourcing, RFQs, POs, and quality inspections**, ensuring high-quality components and on-time delivery.

MANUFACTURING ENGINEER *Firefly Aerospace, Cedar Park, TX* | 06/18 – 11/18

- Developed **manufacturing processes and shop layouts** for aerospace hardware, including coordination with vendors for custom components.
- Led **materials inventory system implementation** and **facility expansion planning**, enhancing production capabilities.



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MANUFACTURING MANAGER *Dynamic Manufacturing Solutions, Austin, TX* | 01/17 – 03/18

- Oversaw **multi-disciplinary manufacturing teams** (welding, machining, production), responsible for **35+ staff**.
- Doubled output of key departments and **built in-house CNC machining capabilities**, driving **hundreds of thousands in cost savings** through vertical integration.
- Directed **layout, construction, and setup of a new 20,000 sq. ft. facility**, collaborating with contractors and city officials.

OWNER & LEAD DESIGNER *White Orca Tactical, Austin, TX* | 06/16 – 12/21

- **Designed and prototyped precision rifle chassis systems**, working directly with end-users to **develop functional and ergonomic designs**.
- Managed **business operations as a licensed firearms manufacturer (FFL Type 07)**, overseeing compliance, testing, and customer relations.
- Conducted **market research, customer feedback sessions, and iterative design cycles** to align products with user needs.

MECHANICAL ENGINEER (R&D FOCUS) *National Energetics, Austin, TX* | 03/16 – 01/17

- Developed and detailed **custom precision opto-mechanical assemblies** for high-intensity laser systems.
- Led **vendor communications, RFQ creation, and procurement processes** for specialized components.

EARLIER ENGINEERING & LEADERSHIP EXPERIENCE

- CONTRACT ENGINEER/IT MANAGER, Oxford Instruments – *Engineering change management, process optimization*
- DESIGN MANAGER, Flexible Lifeline Systems – *Managed engineering teams, product lifecycle management*
- STRUCTURAL DESIGNER, Cameron – *Structural and packaging design for oil & gas systems, Six Sigma certified*
- MECHANICAL DESIGN ENGINEER, Systel Inc. – *Designed ruggedized computer systems, testing, and EMI compliance*
- DATABASE ADMIN / CREW CHIEF, US Army/National Guard – *Aircraft maintenance leadership, secure systems*

EDUCATION

- 100+ credit hours toward B.S. Mechanical Engineering, Austin Community College & other institutions
- Certificate in Small Business Management, Austin Community College
- Six Sigma Green Belt (process improvement focus)

CERTIFICATIONS & LICENSES

- FFL Type 07 (expired) – Firearms Manufacturing
- Lean/Six Sigma Green Belt

KEY STRENGTHS

- Hands-on mechanical design of precision systems for high-reliability environments.
- R&D and prototyping leadership, from concept through production.
- Strong CAD and GD&T expertise with real-world manufacturability focus.
- Proven leadership in both engineering and manufacturing environments.