

Parth Deshpande

(812) 243-9440 | pdesh0106@gmail.com | linkedin.com/in/p-deshpande | parthdeshpandeengineering.com | US Citizen

EDUCATION

Bachelor of Science in Mechanical and Manufacturing Engineering Technologies Aug. 2024 – Dec. 2028

Texas A&M University – Minor in Mathematics

College Station, TX

- **Relevant Coursework:** Manufacturing Processes, Metallic & Nonmetallic Materials; *in progress (Fall 2026):* Computer-Aided Manufacturing (GD&T, CNC/CAM), Composites for Aerospace Structures, Statics

OBJECTIVE STATEMENT

Manufacturing engineer with hands-on floor experience in high-volume automotive production and a composite fabrication background from high-power rocketry, targeting aerospace and defense manufacturing engineering roles.

EXPERIENCE

Manufacturing Engineering Intern

May 2026 – Aug. 2026

North American Lighting

Paris, IL

- Built a custom Python DAQ tool as a process improvement that cut per-dataset logging time from 3:03 to 12.55 sec (93% reduction) and doubled strip-chart output rate versus the proprietary logging software
- Performed a trade study comparing tote and aluminum chute small-parts material handling methods on cost and ROI across a production line (3-month payback period), presented to manufacturing engineering leadership for approval
- Hand-built 50-75 headlamp assemblies and subassemblies over roughly 1 month for new tooling runoff verification ahead of Start of Production (SOP), and operated multiple line stations during trial runs
- Designed and implemented a tote-mounting bracket for machine-front installation, adopted as a standard for new launch lines
- Redesigned the plant ESD compliance audit sheet with automated pass/fail checks and wrote SOPs for the audit equipment

Recovery Manager

Apr. 2025 – June 2026

Texas A&M Sounding Rocketry Team

College Station, TX

- Managed a sub-team of 8 engineers developing flight-critical recovery systems for three vehicles over a 12-month design cycle
- Coordinated cross-team planning with other sub-team managers and led technical training sessions for members

Structures/Recovery Engineer

Aug. 2024 – Present

Texas A&M Sounding Rocketry Team

College Station, TX

- Responsible Engineer for a pumpless, keg-based water deluge GSE system for static fire testing of a bipropellant liquid rocket
- Designing the mechanical structure of a four-point load-cell weighing and CG rig for SRT's propulsive lander (CPLC) vehicle
- Developed machinist drawings with dimensioning and tolerancing, including a two-stage vehicle's avionics bay, and machined flight-critical parts to tight tolerances for vehicle integration
- Fabricated composite airframe tubes for a two-stage, 40,000 ft vehicle by hand-wrapping carbon fiber and fiberglass pre-preg around mandrels, including cure and post-cure finishing
- Spec'ed flight computers and avionics, designed CAD avionics-bay layouts and 3D-printed sleds, and ran charge/range tests
- Led launch and recovery operations across 5-6 launches, including a national competition, for high-performance vehicles

PROJECTS

Torque Transducer DAQ & Visualization Suite

May 2026 – Aug. 2026

North American Lighting – Python, pyserial

Paris, IL

- Developed a two-program toolchain (packaged as executables) replacing a proprietary torque analyzer's limited logging software: a serial logger ingesting recorded torque data to CSV and a companion strip-chart visualization tool
- Plotted an average peak torque threshold line on each graph, replacing manual seat-value derivation with an at-a-glance strip/seat pass/fail check against torque QC criteria
- Built a traceability feature generating a timestamped log of source datasets for each graph, supporting data provenance

CERTIFICATIONS

Tripoli Level 2 High Power Rocketry Certification

Sep. 2024 – Present

Tripoli Rocketry Association / Tripoli Houston – License #32230

Hearne, TX

- Designed, built, and flew a 4 inch diameter, 81 inch long fiberglass/epoxy dual-deploy vehicle for the Level 2 certification flight

TECHNICAL SKILLS

- **CAD & Design:** SolidWorks
- **Manufacturing:** 3D Printing (FDM, SLA), Manual Machining, Composite Layup (carbon fiber/fiberglass pre-preg)
- **Process & Quality:** Lean Manufacturing/6S, Design for Manufacturability (DFM)
- **Software:** Microsoft Office, Python, LaTeX