

PETER ARNOLD

FE Mechanical Engineer, Certified SOLIDWORKS Expert, Bronze Palm Eagle Scout

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TECHNICAL SKILLS

CAD: SOLIDWORKS (Design, Simulation, Rendering), OnShape, Fusion360, Autodesk Inventor

Manufacturing Methods: Injection Molding, FDM/FFF, SLS, Sheet Metal, Soldering

Certifications: FE, CSWE, CSWPA-SU, CSWPA-WD, CSWPA-DT, CSWPA-SM, CSWP, CSWA

Coding: C++, MATLAB, Python, GNU Octave

Other: Prusa/Orca/Bambu Slicer, Betaflight

EXPERIENCE

Contract Mechanical Engineer

March 2026 – June 2026

SiFly

Sunnyvale, CA

- Designed and fabricated 5 custom mechanical adapters and 10+ high-capacity (6S, 72,000mAh) battery packs, leveraging FDM 3D printing to transition **from problem identification to functional prototype in under 6 hours.**
- Led Design for Manufacturing (DFM) and tooling reviews for injection-molded components with international team, correcting geometry errors and successfully qualifying Makrolon 6487 for flame retardancy and thermal compliance.
- Authored comprehensive 50-to-100-step manufacturing build guides for drone chassis and camera gimbals, capturing critical wiring, crimping, and assembly workflows omitted from CAD models to establish official production documentation.
- Assembled 20+ propeller hubs, 2 chassis, and 2 gimbals under tight deadlines, using calipers and go/no-go gauges for first-article inspections that directly unblocked flight testing and customer deliveries.

Contract Mechanical Design Engineer

September 2025 – May 2026

LightLinks, Inc.

Los Altos, CA

- Incorporated stakeholder feedback into same-day photorealistic renders and functional prototypes, balancing manufacturing and aesthetics
- Spearheaded company CAD strategy, leveraging 6+ years experience ensuring smooth client collaboration and design documentation

Staff Mechanical Engineer

May 2024 – March 2025

Zonit Structured Solutions

Boulder, CO

- Optimized design measured by **>2X increase in lifespan**, failure mode improvement to UL standards, and locking force increase
- Revealed product failure under 30 cycles by establishing quantitative test procedure and executing on 100+ samples
- Performed 3 design reviews with injection molding experts, each verifying my design was optimized for mass production
- Charged with establishing company CAD philosophy; including documentation, education, file structure, and templates
- Authored and conducted 4 test plans and reports, providing leadership with actionable data and quantitative results
- Led design and manufacturing of server rack power distribution unit optimizing user ergonomics and industry compatibility

CAD/CAM Course Teaching Assistant

January 2023 – May 2024

University of Colorado Boulder

Boulder, CO

- Educated 3 30-student sections via labs, office hours, and detailed feedback resulting in SOLIDWORKS proficiency
- Earned a 4.94/5 cumulative student review score over 3 semesters and student reviews including: “Peter knows so much about SOLIDWORKS and you can really tell how passionate he is about it”

Mechanical Design Engineer

June 2023 – February 2024

TB2 Aerospace

Boulder, CO

- Generated **\$1.9M** in grants by conceptualizing and iterating 11 projects with 40+ renders to use in marketing, funding contract applications, industry partner discussions, and company recruitment advertising

PROJECTS

Custom Racing Drones | *BetaFlight, OnShape, Soldering*

July 2025 – Present

- Built 3 custom FPV racing drones from scratch, improving soldering, electronics, and firmware flashing skills
- Repaired broken drone via root cause analysis resulting in improved durability, video quality, and flight characteristics

EDUCATION

University of Colorado Boulder

Boulder, CO

Bachelor of Science in Mechanical Engineering, Minor in Engineering Entrepreneurship

August 2020 – May 2024

Chancellor's Achievement Scholarship | FSAE | ΘΤ Professional Engineering Fraternity