

Motorized Product Test Engineer with mid-level manufacturing engineering experience in production testing, process optimization, and quality systems. Proven ability to design and execute validation protocols, drive continuous improvement initiatives, and collaborate cross-functionally with teams to resolve manufacturing challenges. Skilled in DFM/DFA principles, root cause analysis (FMEA, CAPA), materials testing, and production-scale manufacturing system engineering. Experienced in additive manufacturing strategy, creating scalable production plans and DfAM solutions that cut part costs and accelerated time-to-market. Fluent in French and English.

SKILLS

Production Engineering & Process Development

Processes & Fabrication : CNC Machining, Welding, Casting, Production-Scale Additive Manufacturing, Prototyping, Materials Testing (Tensile, Impact, Fatigue with Instron Equipment), Grinding, Laser Cutting, Soldering, Injection Molding, Deburring & Polishing, Powder Coating.

Optimization : Design for Manufacturing (DFM) & Assembly (DFA), Production Testing & Validation, Quality Assurance & Control, Root Cause Analysis (FMEA, CAPA), Continuous Improvement Initiatives, Technical Reporting & Documentation, Manufacturing Strategy & Supply Chain Coordination, Risk Management (PHA, SHA, FMEA), Statistical Analysis (T-Test, Tolerance Interval, ANOVA), Simulation-Based Design, Thermal Analysis, Stress Analysis

Systems : Trade Study & Decision Analysis, Make/Buy & Process-Selection Analysis, Manufacturing Systems Integration, Cross-Functional Interface Coordination, Product Lifecycle Planning, Manufacturing Roadmap Development, System-Level Trade-off Evaluation (Cost/Manufacturability/Performance).

Computer Aided Software

MATLAB, Simulink, SolidWorks, SolidWorks Simulation feature, Fusion 360, AutoCAD, Sharp 3D, Mechanical Graphics, Working Model 2D, Siemens Teamcenter, SPARX Systems Enterprise Architect, Innoslate.

Programming

Python: Intermediate
 MATLAB: Intermediate
 Arduino: Intermediate

Certifications

SolidWorks Mechanical Design Associate (CSWAs) – Obtained
 CSWP – Nearly done
 OSHA Laboratory Safety – Nearly done

Project Management

Microsoft Suite/Office
 Microsoft Project
 Microsoft Planner
 Jira Portfolio Management PPM
 Notion

Languages

English: Full Professional proficiency
 French: Fluent
 Fongbe: Fluent
 Spanish: Limited Proficiency

EMPLOYMENT HISTORY

MOTORIZED PRODUCT TEST ENGINEER

Shark Ninja LLC – Needham, MA

September 2025 – Present

- Design, execute, and document test protocols, aligning them with DQTPs, JIRA tracking, and motorized product requirement documents, which streamlines validation and speeds up release readiness.
- Engineer and execute comprehensive test protocols for 9+ appliance SKUs supporting 4 concurrent product development programs, ensuring manufacturing readiness and production quality standards through rigorous functional and durability validation.
- Collaborate cross-functionally with Product Development, Quality, Compliance, and Manufacturing Engineering teams to resolve design and performance issues, accelerating problem resolution and supporting timely product launches.
- Design, fabricate, and maintain custom test fixtures and instrumentation setups, ensuring repeatable and reliable data acquisition for design validation and production acceptance testing.
- Author and maintain 14+ technical test reports aligned with DQTP requirements and JIRA tracking systems, translating complex test data into actionable engineering recommendations for manufacturing process improvements.
- Communicate findings through data reports, PowerPoint presentations, and team reviews, delivering clear recommendations that guides design iterations and validation efforts, helping reduce design rework.

ADDITIVE MANUFACTURING & LOGISTICS ENGINEER

OsiLab Prototype & Systems LLC - Boston, MA

June 2025 – August 2025

- Developed scalable manufacturing plans and supply chain strategies for 3 early-stage startups and 1 established firm, integrating additive manufacturing workflows into production roadmaps to accelerate time-to-market.
- Provided design-for-additive-manufacturing (DfAM) services including tolerance optimization, material selection, and build orientation strategies to maximize part performance, minimize post-processing, and reduce production costs.
- Qualified and coordinated with vendors, suppliers, and 3D printing service bureaus to establish reliable supply chains, ensuring on-time material procurement and production capacity for client manufacturing requirements.
- Conducted 3 design verification and validation studies, assessing material selection against performance and manufacturability requirements for 3 client engineering programs.
- Created and maintained 7 production documents, supporting manufacturing execution and process consistency across client engagements.
- Initiated and managed clients' projects against program-management guidelines, coordinating scope, timeline, and deliverables.

ADDITIVE MANUFACTURING TECHNICIAN

Douglas D. Schumann Library & Learning Commons – Boston, MA

May 2023 – Apr 2025

- Operated and maintained 10 FDM/3D printers including Prusa Minis, Prusa i3 MK3S, MakerBot Replicator Z18, and Bambu Lab X1C, ensuring optimal uptime and print quality.
- Delivered three technical training workshops to students and faculty, simplifying complex additive manufacturing concepts and contributing to a 40% increase in successful print completions within three months.
- Developed a system for repurposing failed prints and filament waste, supplying sustainable materials for 10+ student engineering projects per semester while reducing lab material waste.
- Troubleshoot slicing errors, printer malfunctions, and adhesion failures, improving turnaround time for print jobs and increasing lab efficiency.
- Supported interdisciplinary teams with design for additive manufacturing (DfAM) feedback, helping users adapt CAD models for printability and structural integrity.
- Served as primary point of contact between students, faculty, and staff for print requests, coordinating equipment scheduling, budget approval, and material needs across the lab.

EDUCATION

BACHELOR OF SCIENCES

MAJOR: MECHANICAL ENGINEERING

Wentworth Institute of Technology – Boston, MA

Relevant Coursework: Thermodynamics, Material Sciences, Scientific & Precision Instrumentations, Heat Transfer, Robotics, Machine Design, Data Analysis, Acoustics and Vibration. Minor: Chemistry

PROTOTYPE ENGINEERING CO-OP

FutureLabs – Boston, MA

Jan 2023 – Apr 2023

- Led the full prototyping lifecycle of the LaneStop safety device, guiding a cross-functional team of 8 students from ideation through alpha prototype selection during Q1 reviews.
- Conducted design research and generated multiple innovative concept sketches, 2 of which were selected for further development due to their technical feasibility and end-user relevance.
- Produced detailed documentation and version tracking for all iterations, minimizing redundant design work and improving communication across development phases.
- Applied DFM principles and rapid prototyping techniques to accelerate validation cycles and reduce material waste.

MECHANICAL ENGINEERING CO-OP

Wentworth Institute of Technology – Boston, MA

Sept 2023 – Dec 2023

- Modeled and analyzed mechanical component behavior using MATLAB and SolidWorks Simulation, generating data-driven insights that informed iterative design improvements.
- Conducted preliminary topology optimization research, integrating findings into mechanical part redesigns to improve material efficiency and structural performance.
- Created and delivered technical presentations to both engineering faculty and non-technical audiences, effectively translating complex concepts into actionable outcomes.
- Participated in campus industry events and engineering showcases, engaging with professionals to gather feedback and align academic projects with real-world applications.

PROJECTS

Automated Gearbox Assembly – Design of Machine Elements Course Project

- Designed an automated gearbox system in SolidWorks with a 97% system reliability rate, integrating mechanical elements and performing FEA stress analysis to optimize key components.
- Delivered detailed engineering drawings, exploded views, and motion simulations for final presentation and peer review.

Robotic Arm with Feedback Control – Robotics and Automation Lab Project

- Developed a robotic arm using Python-based control algorithms and motion sensors for object detection and sorting tasks.
- Programmed and tested closed-loop feedback logic, achieving a functional rate of 2 sorted parts per minute with 90% accuracy.

3D CAD Modeling for Complex Product Assembly – CAD/CAE Coursework Project

- Created a fully detailed mechanical assembly in SolidWorks, including part modeling, hierarchical sub-assemblies, and production-ready technical drawings.
- Emphasized design for assembly (DFA) and dimensional fit, enabling simulated virtual testing of part alignments.

Portfolio: www.cannelleportfolio.com
