ROHITH SUBRAMANIAN

MECHANICAL PRODUCT DESIGN ENGINEER | ELECTROMECHANICAL SYSTEMS | PROTOTYPING

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PROFESSIONAL SUMMARY

Mechanical engineer with 6+ years of experience in electromechanical product development, prototyping, precision tooling, fixtures, failure analysis, and supplier coordination. Skilled in translating mechanical and manufacturing problems into tested design changes that improve performance, reliability, manufacturability, and serviceability.

CORE SKILLS

Product Design & CAD: Electromechanical assemblies, concept development, prototyping, DFM, fixture design, SolidWorks, Creo, AutoCAD, NX CAD, Fusion 360, GD&T, engineering drawings
Testing & Analysis: Failure analysis, root cause analysis, SolidWorks Simulation, stress analysis, topology study, IQ/OQ/PQ, SPC
Manufacturing: Precision tooling, molds, CNC, sheet metal, DFAM, FDM, SLA, SLS, PLA, TPU, lean manufacturing, supplier coordination

PROFESSIONAL EXPERIENCE

Manufacturing Engineer | ANI Pharmaceuticals | New Jersey **Aug 2023 - Present**

- Own troubleshooting and production support for mechanical and automation-enabled equipment in a regulated manufacturing environment.
- Lead failure analysis, root-cause investigations, and corrective actions, reducing unplanned downtime by approximately 20%.
- Drive engineering changes (ECO/MOC) affecting mechanical designs, equipment BOMs, replacement components, and operating procedures.
- Design and release production layouts, equipment retrofits, and support fixtures in AutoCAD to improve access, alignment, and serviceability.
- Support redesign and replacement of aging or obsolete mechanical components; coordinate with suppliers and purchasing on part quality, cost, and lead time.

Mechanical Engineer Intern | Poolular | New Jersey **Sep 2022 - May 2023**

- Designed and prototyped electromechanical systems integrating sensors, control electronics, and mechanical housings.
- Supported fixture-assisted assembly and system integration, improving overall system performance by approximately 45%.
- Collaborated with cross-functional teams through prototype build, test, and design-iteration cycles.

Design Engineer | Vijay Tool Room Pvt. Ltd. | India **Mar 2020 - May 2021**

- Designed precision tooling, fixtures, and molds in SolidWorks and Creo with GD&T documentation and manufacturing drawings.
- Worked directly with suppliers to resolve tolerance, yield, and manufacturability issues affecting part fit and build quality.
- Applied SPC and lean manufacturing to reduce defects by 15%; led a Kaizen that improved assembly productivity by 20% and reduced labor cost by 10%.

Additive Manufacturing Design Engineer | iNSTA3D Technologies | India **May 2018 - Feb 2020**

- Managed end-to-end design, prototyping, and delivery for 100+ production orders.
- Optimized Design for Additive Manufacturing (DFAM), reducing material usage by 20%.

SELECTED ENGINEERING PROJECTS

- Reverse-Engineered Bicycle Fender: Captured geometry with a 3D scanner, cleaned mesh data in Meshmixer, modeled the fender in Geomagic and SolidWorks, and performed stress and topology studies; reduced weight from 1.40 lb to 0.52 lb and 3D printed the design.
- Food 3D Printer: Modeled the printer and paste-extrusion system in Creo; redesigned a cartridge extruder as a peristaltic-pump reservoir to eliminate refill pauses.

EDUCATION

Stevens Institute of Technology | M.Eng., Mechanical Engineering 2023
Anna University | B.E., Mechanical Engineering 2018