

Mugunthan Udayan

Mechanical Engineer & Engineering Manager

A professional Mechanical Engineer with a bachelor's and a master's degree in mechanical engineering. A technical manager 5+ years of hands-on experience in new product design and development. An engineering professional who can manage multiple projects in a fast-paced environment. Currently looking for a full-time opportunity to utilize and develop my skills for the benefit of the organization.

✉ udayan.m@northeastern.edu

📞 9782248199

📍 Canada (Open for Relocation)

WORK EXPERIENCE

Engineering Manager (Plastic Manufacturing) Foxx Life Sciences

03/2021 - 08/2022

Hyderabad, TS, India

End to End Ownership

- Conducted engineering design verification and validation activities.
- Led a team of engineers in design and development of plastic and metal products.
- Managed multiple fast-paced projects from initiation to completion & delivery.
- Created 3D CAD models and engineering drawings using CAD tools.
- Utilized ANSYS and ABAQUS for finite element analysis.
- Facilitated document and design revision control with PDM.
- Built product prototypes using SLA and FDM printers and CNC machining.
- Performed functional tests and prepared test reports on prototypes.

Mechanical Engineer (Plastic Manufacturing) Foxx Life Sciences

02/2019 - 02/2021

Manchester, NH, USA

Achievements/Tasks

- Used CAD tools to create 2D and 3D CAD following GD&T standards.
- Created component fabrication and product assembly drawings.
- Generated product costing & bill of materials using ERP system.
- Prepared engineering documentation, quality specifications and production SOPs.
- Generated standard operating procedures.
- Supported quality assurance team with ECNs, CAPAs, SCARs, RMVs and auditing.
- Collaborated with vendors for component selection, sourcing and manufacturing.
- Gained hands-on experience in various plastic manufacturing processes.

Mechanical Engineer (Plastic Manufacturing) Gillette

02/2018 - 02/2019

Boston, MA, USA

Achievements/Tasks

- Created 3D and 2D CAD files of razor handles and cartridges.
- Utilized ABAQUS for finite element analysis.
- Assisted the integration of SLA machines for manufacturing of razor handles.
- Built in-house prototypes using additive manufacturing.
- Performed fit, form and functional testing of prototypes.
- Operated 3-axis CNC milling machine, Master CAM, FDM and SLA printers.
- Assisted with product specification and packaging specification documentation.

SKILLS

Solidworks PDM
PTC Creo Inventor NX
GD&T DFMA FEA
Product Testing ANSYS
ABAQUS CNC DFMEA
Prototype Development
PFMEA G-Code SOP
MasterCAM BOM
Six Sigma DoE

CERTIFICATES

AIGPE Lean Six Sigma Green Belt (04/2023)

Provided by Advanced Innovation Group
Pro Excellence

AIGPE Lean Six Sigma Yellow Belt (02/2023)

Provided by Advanced Innovation Group
Pro Excellence

AIGPE Lean Six Sigma White Belt (12/2022)

Provided by Advance Innovation Group Pro
Excellence (AIGPE)

TUM Lean Six Sigma Yellow Belt (11/2022)

Provided by Technical University of
Munich, Munich, Germany

Certificate of Merit (Creo, Catia & UG) (07/2015)

Provided by CADD/CAM Solutions,
Chennai, India

Diploma in Computer Application (03/2007)

Provided by Apollo Computer Education
Ltd



WORK EXPERIENCE

Research Assistant Northeastern University

05/2017 - 12/2017

Boston, MA, USA

Achievements/Tasks

- Operated Universal Tensile Machine.
- Performed stress-strain analysis with Universal Tensile Machine.
- Utilized MIMICS to develop a computational model of the tibia from CT scan images for finite element analysis.
- Used ABAQUS and ANSYS to perform stress-strain analysis of the tibia with predefined boundary conditions and loads.
- Utilized MATLAB to process force data.

Mechanical CAD Engineer (Teaching) CADD/CAM Solutions

05/2015 - 11/2015

Chennai, TN, India

Achievements/Tasks

- Mentored more than 250 engineering and diploma students on AutoCAD, PTC Creo, Catia V6, Solidworks, NX and ANSYS.
- Conducted technical seminars on CAD tools at various colleges and universities.
- Facilitated workshops on CAD tools, ANSYS and ABAQUS.



EDUCATION

Master of Science, Mechanical Engineering Northeastern University

01/2016 - 12/2017

Boston, MA, USA

Bachelor of Engineering, Mechanical Engineering Anna University

08/2011 - 05/2015

Chennai, TN, India



LANGUAGES

English

Native or Bilingual Proficiency

Tamil

Native or Bilingual Proficiency

Hindi

Limited Working Proficiency

German

Elementary Proficiency