Parth Bhatt

Ph: +1 617 860 8568 | email: parth@u.northwestern.edu| Portfolio: pbhatt.net

Summary

Energetic Mechanical Design Engineer who can work across mechanical and electrical/electronic systems with ease. Aims to collaborate with a cross functional team and contribute technically and creatively to the process of creating products to solve complex human needs.

Education

MS | NORTHWESTERN UNIVERSITY | MAJOR: ENGINEERING DESIGN AND INNOVATION | DECEMBER 2016 | GPA 3.875/4

BS | VELLORE INSTITUTE OF TECHNOLOGY | MAJOR: MECHANICAL ENGINEERING| JUNE 2014 | GPA 8/10

Experience

PRODUCT DEVELOPMENT ENGINEER | HANK INDUSTRIES *February 2017-Present, Chicago, IL*

- Worked with clients to build low volume, proof-of concept prototypes with 3D printing, Laser cutting, CNC machining, etc.
- Designed automated food dispensing and lockout mechanism with RFID technology; Developed 3D CAD models in SolidWorks, fabrication using 3D printing (Fused Deposition Modelling), circuit breadboarding, and Arduino programming
- Designed circuit boards for IoT sensor platform in Eagle CAD; Introduced new features to existing product; Improved on existing design to achieve moisture resistance; 3D modelled and fabricated enclosure for electronics via 3D printing and Laser cutting
- Developed manufacturing process for low volume (1000pcs) wooden facade production using laser Cutting and Laser engraving
- Analyzed client requirements to create iconic table for catering firm; Used parametric modelling methods to quickly iterate on CAD model based on variable inputs from client. Designed assembly using master modelling techniques; Fabricated design using CNC cutting, 3D printing, and manual woodworking; Adapted parts for manufacturability by CNC machining

MECHANICAL DESIGN ENGINEER INTERN | HLB *June 2016-August 2016, Evanston, IL*

- Designed Industrial dust-collection device to meet client's requirements for dust collection with minimal use of consumable filters; Analyzed design parameters for cyclonic separation device in Excel; Created product architecture, interfacing with Industrial Design team to meet client requirements
- Performed CFD simulations to validate performance of fluid system; Created 3D CAD models for Rapid Prototyping using 3D printing; Reduced prototyping costs by 50%; Devised and conducted tests for dust collecting efficiency
- Collaboratively created complex 15-part assembly for fabrication with engineering team of four using Parametric modelling, surfacing, and master modelling in SolidWorks; Designed parts for injection molding using polypropylene; Applied draft, sliding tolerance, shut-off, poka-yoke, and top-down assembly design principles to 3D model; Interfaced with Chinese vendors for part sourcing to determine key product dimensions

MECHANICAL DESIGN ENGINEER | UNITY ENGINEERS *June 2014-August 2014, Gujarat, India*

- Designed and fabricated prototype model aircraft using novel fuselage design
- Analyzed lift/drag characteristics of different standard airfoils to achieve serviceable design for aircraft; Calculated total lift and drag on proposed aircraft design for different angles of attack
- Balanced centers of mass and lift for greater stability in flight; Reviewed effects of different materials for different components
- Modeled aircraft framework in SolidWorks using parametric modelling; Created aesthetic model of aircraft to show to investors
- Designed control system for aircraft; control surfaces included rudders, elevators, ailerons

Skills & Abilities

- CAD/CAM (Solidworks/NX)
- Digital Fabrication (Laser Cutting, 3D Printing, CNC milling)
- Rapid Prototyping
- Mechanism Design
- Design for Manufacture and Assembly
- Interaction Design (Proto.io)
- Human Centered Design
- Communication Design (Adobe Creative Suite)
- PCB Design (Eagle CAD)
- Electronics Programming (Arduino IDE/C/C++)
- Electronics Production (Soldering, Debugging, PCB Layouts)
- FEA/CFD (ANSYS, SolidWorks)
- Coding (C, HTML, MATLAB)