Parth Bhatt

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Summary

Energetic Mechanical Engineer who can work across mechanical and electrical/electronic systems with ease. Aims to contribute and collaborate in a technical and creative capacity to the process of creating products to solve complex human needs.

Education

MS | DECEMBER 2016 | NORTHWESTERN UNIVERSITY | Major: Engineering Design and Innovation | GPA 3.875/4

BS | JUNE 2014 | VELLORE INSTITUTE OF TECHNOLOGY | Major: Mechanical Engineering, GPA 8/10

Experience

MECHANICAL DESIGN ENGINEER INTERN | HLB LLC
June 2016-August 2016

· Created new product for client using HCD process

· Performed engineering analysis on electro-mechanical product

· Generated novel Intellectual Property (patent pending) for client

· Performed CFD simulations to test performance of fluid subsystem

· Rapid prototyped SLA parts developed in SolidWorks

· Performed tests on prototypes to validate designs

· Created complex 15-part assembly for fabrication.

· Iterated on CAD models to create parts for Manufacture and Assembly

· Worked with offshore development partners for part sourcing and manufacture

FABLAB TECHNICIAN | CEPT UNIVERSITY
October 2014-July 2015

· Ran an open access digital fabrication lab as a technician

· Instructed users on digital fabrication methods and design methodologies (Laser cutting, CNC milling, Electronics design, 3D scanning, CAD, programming, 2D plotting,)

· Assisted startup companies with design and fabrication of prototypes in a technical capacity (CAD, Dimensioning, design for fabrication)

MECHANICAL DESIGN CONTRACTOR | UNITY ENGINEERS
June 2014-July 2015

· Designed and fabricated a model aircraft using a novel fuselage design.

· Calculated Lift/Drag characteristics of different airfoils/wings

· Created BOM for prototype build

· Modeled aircraft using SolidWorks

· Fabricated airframe from XPS foam using a CNC router

Relevant Projects

FLEX | EDI MASTER'S THESIS
September 2016
Designed an electro mechanical device with simple GUI to gamify stretching exercises for musicians

· Integrated complex electronic, mechanical, and digital systems

· Conducted Human Centered Design research

· Created rapid prototypes to validate design directions

· Designed and prototyped an electromechanical system using load cells, linear actuators, an Arduino, and a Processing environment GUI.

· Designed variable-angle hardware platform for interactive device

· Iterated on Prototype with two rounds of user testing

HUMAN CENTERED DESIGN WITH P&G
October 2015
Project sponsored by Procter & Gamble. Involved conducting several rounds of consumer research, Rapid prototyping, user testing and validation. Delivered a new CPG concept to client.

· Conducted Need-finding via in-home contextual interviews, on-site user testing and surveys

· Generated and prototyped several CAD models for rapid prototyping (SLA,FDM) using SolidWorks

· Created UI/UX prototypes using Adobe creative suite

· P&G has acquired the Intellectual property of the project from us

SENIOR DESIGN PROJECT | SHOCK-ABSORBING BUMPER
November 2015
Designed a shock absorbing bumper for low-speed automobile collisions.

· Designed a mechanism inspired by scissor lifts to absorb impact energy from a low speed collision.

· Simulated mechanism in MSC ADAMS, modeled it in SolidWorks.

· Performed analytical calculations using MATLAB and verified them against simulation results from MSC ADAMS

Skills & Abilities

· CAD (Solidworks/NX)

· Digital Fabrication (Laser Cutting, 3D Printing, CNC Milling)

· Mechanism Design

· Design for Manufacturing and Assembly

· GD&T

· CAM (Vectrix, NX)

· FEA/CFD (ANSYS,SolidWorks)

· Human centered Design

· Excellent Communication Skills

· PCB Design (Eagle CAD)

· Electronics Programming (Arduino IDE/C/C++)

· Electronics Production (Soldering, Debugging, Board Layout

Languages

English	*Native/Professional*
Gujarati	*Fluent*
Hindi	*Fluent*
French	*Basic*