

Pranjal Verma

Process/Mechanical Engineer

Mechanical Design Engineer with an understanding of process equipment and production/utilities systems, cGMP commissioning/qualification (IQ, OQ), HAZOP&Safety activities.



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Singapore Citizen

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WORK EXPERIENCE

Mechanical Product Design Engineer Ideagen-DryPLA

09/2018 – Present

Achievements/Tasks

- Engineering design for a modular and scalable mechanical design for 3D printers to suit needs for FDM 3D printing both industrial and individual applications

Technical Team Lead BiggWorld-BiggTech

12/2018 – Present

Achievements/Tasks

- Leading a team of 4 to build a Blockchain Based POC Web application, bringing automation to streamline Supply Chain operations

Technical Automation Engineer INVICTUS

05/2018 – 08/2018

Blockchain Company

Achievements/Tasks

- Worked on software and automation systems to improve their current Web-based Platform

Summer Intern CIMB Bank

05/2017 – 07/2017

Achievements/Tasks

- Facilitated business requirements, payments and transactions between CIMB and other financial institutions
- Performed review, evaluations and re-pricing of existing loans of clients and correspondent banks

Combat Engineer, Bridging engineer Singapore Armed Forces

02/2014 – 02/2016

Achievements/Tasks

- Supported Bridging Operations over land and water
- Supported the 28th South East Asian Games (Logistics planning, Props design, Crowd management, safety coverage and participation as actors on stage)

EDUCATION

Bachelor of Engineering(Engineering Product Development)

Singapore University of Technology and Design (SUTD)

05/2016 – Present

GCE 'A' Level

Jurong Junior College (JJC)

01/2012 – 12/2013

GCE 'O' Level

Anglo-Chinese School (Independent)

2008 – 2013

SKILLS

Solidworks Python Adobe Illustrator

Fusion 360 3D Printing PCB Design

Adobe ExperienceDesign Laser Cutting

Javascript NodeJS

CO-CURRICULAR ACTIVITIES

SUTD Fabrication Lab Ambassador (06/2017 – Present)

Provide masterclasses to students and professors to allow efficient use of equipment in the Fabrication Lab

LiteWerkz Tesselations Of Time (SG NightFest 2017) (04/2017 – 08/2017)

Collaborated with 3M on an installation that combines design and manufacturing

Makerfaire Singapore (06/2017 – 06/2017)

Represented SUTD Fabrication Lab on a world scale. Provided functional and mechanically tested 3D printed models

Rapid App Prototyping Workshops (2016 – Present)

Held Numerous workshops teaching SUTD students as well as JC/Poly Students on web based app design

SUTD IEEE Hackathon (08/2017 – 08/2017)

1st place winner, designed a system to make commute between classes more enjoyable, more interactive

Autodesk DesignGoodNow Hackathon (09/2017)

Medical Design Hackathon at Autodesk fusionopolis office/makerspace. Innovated a smart walking stick for the blind

SUTD Open House (2016 – Present)

Used mechanical software and CAD to provide 3D printable designs to promote SUTD's Fabrication Culture

LANGUAGES

English
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Hindi
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MEMBERSHIPS

IEEE ISPE IES

INTERESTS

Automation Robotics Writing

Cooking Badminton Travelling

Hands-on Projects

Pranjal Verma

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📍 Singapore

SELECTED PROJECTS

Robotic Arm 3D Printing

Worked on ABB and KUKA robot arm to replicate bio-inspired design. Created a variable diameter nozzle to extrude composite materials of varying thickness without changing toolheads. One continuous path can form intricate structures of varying tensile strength, much like a spider weaving its web

Modular CNC Machine Design

Ideated and fabricated a full scale modular CNC Machine with swappable toolheads(Laser, Drag Knife, Pen). It uses an innovative snap-lock mechanism to allow the machine to be deployed for on-site fabrication of art installations to cut a variety of materials of any size.

(AI)R Hockey Table - Makerfaire

Created an interactive Air Hockey table that allows a user to play with a computer opponent. The computer learns over iterations and gets better over time using concepts from AI and machine learning. The project was showcased at Makerfaire SG hosted at Our Tampines Hub.

Autonomous Robotics

Worked with a team of 4 to investigate algorithms for mapping and navigation of autonomous robots. Exploring small form factor computational hardware for robots

Modular Crutch Design

3D printing adaptable user specific leg braces to form innovative crutch to address the inconveniences of traditional crutches . Prototyped a modular crutch aimed for ACL and meniscus injury that is light weight, comfortable, and convenient.

Water Harvesting - LEAF

Built a fully functional self-sufficient structure- targeted at tropical countries such as Singapore- that uses solar power and rain water to provide a small community with clean potable water. The project was also selected for consideration by the MIT International Design Centre.

Soft Robotic Chassis ATV

Designed a robotic all terrain vehicle with First person view camera to allow for autonomous control. It also has a soft chassis which allows there to be no suspension in the vehicle. Additionally, it is able to wrap itself around pipes and move along them, which give it another level of mobility

SKILLS

Rhino3D

Grasshopper

Arduino

Biomimetic Inspired Design

SKILLS

Autodesk Fusion 360

Grbl

CNC Machining

Laser cutting

Mechanical Design

UI Design

SKILLS

Computer Vision

Arduino

Google ML Kit

CNC Milling

Automation

SKILLS

Matlab

Simulink

USARSim

SKILLS

Solidworks

3D printing

Parametric Design

SKILLS

PCB Design

Autodesk Eagle

Electronics Design

Automation

Autodesk Fusion 360

SKILLS

Electronics Design

Soft Robotics

Autodesk Fusion 360

Pneumatics