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Professional Education

SGT University, Gurugram **2018 - 2022**
B.Tech. in Mechanical Engineering CGPA: 8.79

- Made it to the Dean's List of scholars
- Member of ISHRAE, ASME, ASHRAE, SAEINDIA
- Elected as a President of AET Association of Engineers and Technocrats @SGTU

Blue Bells Public School, Gurugram **2017- 2018**
High Schooling, Physics, Chemistry, Maths 80%

- Best Idea Award under Inspire Internship Program, By DST (2nd Position)

Skills

Languages: Python, HTML, CSS, ReactJS
Tools & Technologies: Fusion 360, Blender, MS Excel, MIMICS, Solid works, Spline, Netfabb
Core Skills: Effective communication, Team management, Logical reasoning, Delegation, Conflict resolution, Team Work, Empathy, Planning, Designing, UI & UX Selection, Innovator.

Research and Patent

Patent:

- **Title**: A smart lap-post for air purification
  Patent no: 2021104404
- **Title**: A smart lap-post for air purification (Design)
  Patent no: 347383-001
- **Title**: Advanced ISF method by using Laser & Advance mechanism
  Patent no: 2021102997 A
- **Title**: In-bed exercising and monitoring device
  Patent no: 2021100325
- **Title**: Yoga bed for health tracking (Design)
  Patent no: 353934-001
- **Title**: Self sanitizing attendance recorder with thermal screening.
  Patent no: 2020104395
- **Title**: Bio-printing device and system for wound healing
  Patent no: 202111006553 A
- **Title:** Apparatus & Method for multi-material extrusion based 3d Printer
  Patent no: 202011054516
- **Title:** A system and process for recycling waste fabrics

Patent no: 2021102761

Extracurricular

Hobbies:

- Singing
- 3D printing
- Designing
- Football
- Cooking
- Composing beats

Certifications & Courses:

- "**AUTO CAD - 2018**"- Intern Shala
- "**Python Programming**"
- "**Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360**"- Autodesk- coursera.org/verify/XSRLLUAMVVHT
- "**Machine Learning pipelines with Azure ML Studio**"- Coursera Project network coursera.org/verify/VJGD66CVTG4Y
- "**The Raspberry Pi Platform and Python Programming for the Raspberry Pi**"- UCI coursera.org/verify/9ALTZ2UXPKQ8
- "**Strengthening Your Widening Network**" coursera.org/verify/XRJ2SRJKT6TV
- "**Introduction to Artificial Intelligence (AI)"**- IBM coursera.org/verify/CVXUPNMCG3WY
- "**The Raspberry Pi Platform and Python Programming for the Raspberry Pi**"- UCI coursera.org/verify/9ALTZ2UXPKQ8
- "**Programming for Everybody (Getting Started with Python)**"- University of Michigan- coursera.org/verify/HUWWJ95XMJRC
- "**Python Data Structures**"- University of Michigan- coursera.org/verify/TERF7CBZ5KVM
- "**Establishing a Professional 'Self' through Effective Intercultural Communication**"- National University of Singapore- coursera.org/verify/QEBHXCBXNKXU
- "**3D Printing Software**"- ILLINOIS- coursera.org/verify/X4FK94YMMY3L
- **"DDA691x: Product Design: The Delft Design Approach**"-DelftX- edX df96dd0d860d42f7b980bfa28a40bd71

Projects

Gestured Controlled Robot **2018**

- Built a robot capable of lifting object of about 25 kg over thrice the weight of the Robot itself.
- Acceleration and Movement of End effector was controlled using human gesture using flex sensors.
- Range of control was approx. 200m-300m
- Were used to pick and place items further was evolved to become a wall climber robot for wall cleaning

Fabrication of 3D printer **2019**

- Built a three-dimensional printer capable of prototyping various materials and designs.
- It was majorly used for medical purpose for external prosthesis and pre-operative patient prototypes.
- It was a Fused deposition modelling based Printer with the bed size of 310*310mm
- Build volume of 300x300x800mm.
- Capable of Printing PETG, ABS, PLAS, Carbon Fibre and Diamond mixed filament.

Mechanical ventilation device for human resuscitation **2020-2021**

- Fabricated a ventilator capable of resuscitating patients using mechanical means.
- Easy to transport portable ventilator with PIP, PEEP, O2 level, Blood pressure monitoring features.
- Automatic breath stabilizer with 7" display portraying User Friendly Interface.
- Comparatively Low-cost transport ventilator.

Aerosol Containment device **2020**

- Built a device capable of entrapping all the aerosols that gets transmitted from patient while operation during the times od covid pandemic.

A Self sanitizing, segregating and Sorting device for currency **2021**

- Build a device which is able to sanitize and detect any currency which goes in and segregates the currency according to their values. (Valid only for Indian Currency)
- Uses OpenCV to detect the notes based on Size, Colour & training set.

Vento monitor **2021**

- An intelligent ventilator for recusation of patients.
- Comes with Gprs Module to track the movement of patients that are connected with the ventilator.
- Enable web access to the Nearby Doctor via help of QR Code.
- Doctor can Control whatever parameter he/she think are the best for the patient at that instance.

Oxygen Concentrator **2021-2022**

- Fabricated an in-house Concentrator with a capacity of generating 30 l/min of oxygen that can be used to provide oxygen to patients
- Automatic Breath detection and Pressure control.
- Manually adjustable limit of LPM
- Embedded SpO2 monitoring, O2 Analyser and Pressure sensor to adapt the system with the patients.

Leadership

AET **Role: President** **2019-2021**

- Made sure of the proper functioning of Student executive committee.
- More than 350 project were made under the Association of Engineers and technocrats.
- Organising Technical Events, Hands-on workshops, Student cum Faculty development Programs.
- Connected all the faculties of university to come out and participate in inter-disciplinary projects.

ICMAI **Role: Volunteer and Coordinator** **2020**

- Checked Plagiarism using Software and made list of the errors and coordinated with the respective presenters.
- Volunteered in managing all the research papers

Experience

CLICK@SGTU **Role: Research Intern** **2022**

- Prepared A website using ReactJS entailing information about my project and its Progress.
- Made CAD for my Modular boat Assembly
- Open-sourced my work in Arduino portal and wrote a blog about it.
- Developed code for the project assigned to me.

I hereby declare that all the above information is correct and accurate.