Peri Shanmukha Ram

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EDUCATION

Clemson University — **Clemson**
Master's in Mechanical Engineering — *Aug 2021- Present*

Vellore Institute of Technology — **Andhra Pradesh**
Bachelor of Technology in Mechanical Engineering — *June 2017- July 2021*

- CGPA - 8.54/10

PROFESSIONAL WORK EXPERIENCE

Garuda 3D — **Hyderabad**
Mechanical Engineering Intern — *Dec 2020- July 2021*

- Assembled more than 35 FFF(Fused Filament Fabrication) 3D printing machines.
- Designed, sliced and 3D printed over 40 different products such as micro-controller cases, cases for medical equipment such as ventilators with different materials like PLA, ABS and PETG.
- Prepared common problems and solutions manual, Ultimakers slicer manuals for customer support.
- Prepared Powerpoint presentations about additive manufacturing, 3D printing for workshops and customer support.
- Coached over 200 students on slicing, 3D printing, post processing in 3D printing workshops conducted by Keerthika Technologies in different schools and colleges.

Illenium AI
Mechanical Design Intern — *June 2020- Aug 2020*

- Worked in a team of four members and designed planetary motion gearbox and performed motion analysis using Solidworks.
- Designed a 3D model smart garment that monitors the vitals of the human body such as ECG, muscle activity that potentially can help a lot of fitness freaks to enhance their workouts and yoga.
- A triangular Detachable ARC was created at mid-chest level of the garment which can be used as a technology Hub that houses the major electronics.
- Designed a student chair with portable back shell (Neck piece of the chair) using Solidworks

PROJECT EXPERIENCE

Design and analysis of lengthwise gradient honeycomb core for obtaining graded beam properties.
Tools/Technology - Solidworks, Ansys Workbench — *July 2020- Dec 2020*

- Different types of honeycomb structures are designed and geometrical dependent properties like Honeycomb density, cells per honeycomb surface area and many more are calculated to observe the trend when dimensions are increased gradually.
- Designed lengthwise gradient honeycomb structures and compared its behaviour with regular honeycomb structures when acted as cantilever beams and subjected to different types of loading conditions like point load and impact loading.
- A sphere of stainless steel was made to impact the free end of lengthwise gradient honeycomb structure at different speeds to extract total deformation, energy probe and energy vs time graphs.

Agri-Bot
Tools/Technology -Raspberry pi 2, Motor Driver, RF controller. — *Dec 2019- April 2020*

- Built a di-wheel automated machine which can be used to decrease farmers' efforts in tasks like seeding, watering, ploughing etc.
- Designed and built an actuating mechanism by applying the principles underlying the cabinet profile sliding mechanism using ball bearings.

Design and Simulation of Convergent LPG Burner Containing Diffuser
Tools/Technology- Solidworks, Ansys Workbench — *Dec 2018- April 2019*

- Designed a new mode of burner with convergent holes and fuel is supplied at the same flow rate and volume

- Found out certain angles in which holes should be converged to get maximum efficiency and used diffuser to reduce emissions from burnt fuel
- Applied and filed a design patent. Patent is yet to be granted.

Glass Cutting Bot

Tools/Technology- Arduino UNO, Motor Driver, RF controller. *Dec 2017- April 2018*

- Built a four wheeler bot with wooden chassis and controlled it with a radio frequency controller by programing Arduino UNO with Motor driver.
- Attached a tungsten carbide glass cutter edge at the tip of the chassis and a small motor in vertical orientation so that glass can be cut in any desirable shape by driving the four wheeler bot.

TECHNICAL SKILLS

- **Design Software:** SolidWorks, AutoCAD & CATIA
- **Languages:** C++, MATLAB, Python
- **Application Software:** MS Excel, MS Powerpoint, MS Word.

CONTRIBUTIONS

Youtube Content Creator *May 2021- Present*

- Channel based on sharing my experiences on studying abroad and helping students who want to pursue postgraduate studies in different countries.
- Channel with 700+ subscribers and 20,000+ cumulative views in just 3 months.