**SANDEEP KUMAR R**

**PROFILE**

An aspiring mechanical engineering graduate, seeking an entry level position preferably in the field of

design engineering, with special interests in areas like Engineering mechanics, Strength of materials and

related areas, resulting in meaningful contribution towards organizational growth along with personal

and professional development.

**EDUCATION**

* **B.Tech** **Mechanical Engineering**

**CGPA – 8.42 / 10 2019-2023**

Amrita Vishwa Vidyapeetham

* **Class 12** – 83.67% **2019**

Institution: A.V.P Matriculation Higher Secondary School, Tirupur

* **Class 10** – 95.2% **2017**

Institution: A.V.P Matriculation Higher Secondary School, Tirupur

**TECHNICAL INTERESTS**

Strength of Materials

Engineering Graphics

General Automotives

**PROJECTS**

**Modelling an electric juicer by reverse engineering**

Objective : To dismantle, measure and model the electric juicer realistically

Technique & tools used: Autodesk Inventor 2021 (modelling and drafting), Autodesk Fusion 360 (rendering).

**AMRITA RACING - Building Formula Style Student race car,** 2021 - present

Events: Formula Bharat 2021, Rev-it 2021

Role : Head, Chassis and Aerodynamics

Member: Cost & Manufacturing, Accounts & Finance

Objective: To design a spatial tubular type chassis for an formula style race car.

Outcome: A formula style race car that is ready to run on track & compete with different teams from

universities all over India.

Tools or techniques used: Autodesk Inventor, SolidWorks, Ansys Workbench.

**Optimization of process parameters in Wire Electric Discharge Machining using Bio-inspired algorithms**, 2023 - present

Objective: To optimize the process parameters such as Pulse On, Pulse Off, Peak Current, Gap

Voltage and Dielectric Flow Rate to obtain optimal values of surface roughness, kerf width and material removal rate.

Outcome : To achieve optimal values of surface roughness, kerf width, taper angle and material removal rate for the given range of input parameters and for the given material.

Tools or techniques used: Autodesk Inventor, Design Modeller, Matlab.

**Processor In Loop testing of master controller for series hybrid vehicle,**  August 2022 - Present

Objective: To model a master controller for series hybrid vehicle with optimal power

switching strategy.

Tools used : Matlab, Simulink.

**TECHNICAL SKILLS**

AutoCAD, Autodesk Inventor, Fusion 360, SolidWorks, Ansys Workbench, Ansys Mechanical APDL  
Python (Basics)

MSC Adams View (Basics), Matlab (Basics), Simulink (Basics)

**INTERNSHIP**

**CAI Mahindra PVT LTD,** 15 days

i) Got to know about the basic components in a car.

ii) Wheel balancing – how and why it is done.

**Bharat Earth Movers Limited**, Palakkad Complex

1 month

i) Got to know about the different subsystems of the BEML Tatra and how

different department in the organization works.

ii) Observed the assembly procedure of BEML Tatra.

iii) Gained insights on how to reduce man hour and labour by implementing automation.

**ACHIEVEMENTS & HONOURS**

Formula Bharat 2021 - **AIR 11thoverall, AIR 7thin Engineering Design** (Virtual event)

Rev-it 2021 - **2nd in Endurance Racing**

Active member of **Live in Labs**

**LANGUAGES**

English, Tamil