

ANUP KULKARNI

<https://www.linkedin.com/in/anup-y-kulkarni> | +91-9923774284 | me16b012@iittp.ac.in

EDUCATION

B.Tech: Mechanical Engineering Indian Institute of Technology, Tirupati, AP, India GPA: 8.31/10 2020

SKILLS

- Experienced with FEM software including **ANSYS** and proficient with **CAD modeling** on various platforms
- Capable of programming in **C**, **Python**, and **MATLAB**

PROJECTS

- **Development of a CFRP honeycomb and composite mirror for space applications** 2020
Completed the ANSYS analysis to study influence of cell size and height to optimize honeycomb performance. Manufactured mould of hexagonal honeycomb structure and carried out initial prototyping.
- **Manufacturing, Designing of the CFRP Mirror and Optimization of MFDs for Space Application** 2019
Optimized CFRP honeycomb parameters using modal and structural analysis in ANSYS. Manufactured and assembled a composite CFRP mirror. Optimized Mirror Fixation Device (MFD) parameters using Zernike analysis in MATLAB.
- **Designing of ergonomic crutches to reduce stresses on the radial nerve and improved ease of handling** 2019
Designed a retrofittable attachment with smart locking mechanism to improve user comfort and provide additional body movements.
- **Developing an app to design a spur gear pair for given working parameters in MATLAB** 2018
Built a MATLAB app which gave gear design parameters, and material preferences as outputs for the input operating conditions.
- **Numerical analysis of composite car bonnets for maximum pedestrian safety during frontal impact** 2017
Used ANSYS Workbench to stimulate pedestrian head impact with front bonnet of a car and used head impact criteria to determine safety factor for a given composite material used in the car bonnet.

PROFESSIONAL EXPERIENCE

- **Graduate Engineering Trainee, Larsen and Toubro Limited** 2020
Completed various training courses on engineering, and business management. Completed a SCADA design for water distribution system.
- **Intern, Indian Space Research Organization (ISRO)** 2019
Manufactured and designed a prototype Carbon Fiber Reinforced Plastic mirror (CFRP) mirror. Performed an extensive literature survey to support the studies.
- **Project Trainee, Tata Technologies** 2017
Performed bench-marking and trend analysis. Made CAD model of a car panel and used static analysis tools for design validation.

ACCOMPLISHMENTS

- **Inter IIT, Tech meet, BETiC Medical Challenge, IIT Bombay, 1st Position** 2019
- Selected for **Sakura Science Exchange Program**, Japan to represent India 2014
- **INSPIRE science competition, top 60 projects in India** 2013
- **Maharashtra State Pollution Control Board Project Competition, 1st Position** 2011
- **National Children Science Congress**, A Grade at the national level conference, Chennai 2010
- **National Children Science Congress**, A Grade at the national level conference, Ahmadabad 2009

LEADERSHIP

- **Head**, Content Development Team, Tirutsava (Technical & Cultural Festival of IIT Tirupati) 2018-2019
- Member, **Editorial Board** - Samvid (Official Newsletter of IIT-Tirupati) 2017-2018
- **Coordinator**, Gagan Vedhi Astronomy Club IIT-Tirupati 2016-2018

EXTRA-CURRICULAR ACTIVITIES

- **Debating and Quizzing:** Represented IIT Tirupati at various debating and quizzing competitions
- **National Cadet Corps:** Best Cadet, Kolhapur Division
- **Tabla** (*Indian percussion instrument*): Completed Praveshika and Prathama exams