

# ANUP KULKARNI

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## EDUCATION

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

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

## 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 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

## 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 did design validation using static analysis

## 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 Tirupat) 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