

Divya Rathore

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EDUCATION

- **Birla Institute of Technology and Science, Pilani** August 2015 – May 2020
Bachelor of Engineering(Hons) in Mechanical and Master of Science in Physics; CGPA: 8.54/10

WORK EXPERIENCE

- **Team Garuda, BITS Pilani** August 2017 - Present
(Under Prof MS Dasgupta, HOD, Mechanical Dept., BITS Pilani)
Team Lead- Structural Design and Computational Fluid Dynamics
 - Designed structure of Wing, Fuselage, Empennage (Vertical and Horizontal Tail) and Landing Gear for a reconfigurable Vertical Take-off and Landing Aircraft for expanded mission capabilities.
 - Performed detailed analysis to check airworthiness/airframe loads and stress analysis of components.
 - Used Self developed MATLAB code and qualitative analysis to evaluate each design.
- **Founder and Team Lead- Engineers without Borders, BITS Pilani Chapter** May 2018 - Present
(Under Prof MS Dasgupta, HOD, Mechanical Dept., BITS Pilani)
 - Liaised with EWB International and India executive offices to setup the branch for the NGO .
 - Designed a DIY Machine to Extract Biofuel from Absorbent Hygiene Waste Selected to present paper at 8th International Conference on Sustainable Waste Management, 2018 under the aegis of ISWMAW.
 - Working on solving the problem of water shortage in Pilani town and water clogging on roads during rainy season simultaneously by designing a ground water replenishing system.
- **Summer Intern at Essar Power, Hazira** May 2017 - July 2017
(Under Mr Ramesh Reddi, Maintenance Head, Essar Power, Hazira)
 - Calculated efficiency of Boiler, Cooling Towers and Plate type heat exchangers of the power plant.
 - Performed a detailed performance assessment of Induced Draft Cooling Tower of the plant.
 - Designed Performance Improvement solutions for firing order in Boiler and re circulation in Cooling Towers which can improve the performance of the plant by 3% using data from on-field and control room.
- **Inspired Karters - Formula Student Team, BITS Pilani** August 2015 - May 2017
(Under Dr Shyam Sundar yadav, Mechanical Dept, BITS Pilani)

Worked in Engine and Electronics Subsystem of Formula Student team of BITS Pilani.

 - Implemented Engine Management System controls, Engine sensors, shifting actuation, fuel and ignition.
 - Worked on Data Acquisition, sensors and steering wheels, implementing sensors and wireless telemetry.

KEY PROJECTS

- **Analysis of Air Cooled and Water Cooled Condensers for Chiller Plants** May 2018 - January 2019
(Under Ass. Prof. P. Srinivasan, BITS Pilani)
 - Determined performance of types of condensers from heat transfer and water usage perspective.
 - Designed condensers based on Heat exchanger principle and overall heat transfer coefficient.
 - Determined sizing of the condenser using water loss and techno economic viability.
- **Quantum Electrodynamics Calculations and Quark Gluon Plasma** June 2018 - December 2018
(Under Ass. Prof. Madhukar Mishra, Physics Dept, BITS Pilani)
 - Calculated decay rate and cross section using Quantum Electrodynamics Calculations.
 - Studied about current status of physics of Quark Gluon Plasma and experiments in various colliders.

ACADEMIC ACCOMPLISHMENTS

- **Best Overall Outgoing Mechanical Engineering Student 2018-19:** Awarded Chitrarth Dagar Memorial Award for Best Outgoing Mechanical Engineering Student of the year, BITS Pilani
- **'Best New Undergraduate Entry' at American Helicopter Society 35th International Student Design Competition:** Designed a Re-configurable VTOL Aircraft for mega city type environment.
- **First Runner-up in Apogee Innovation Challenge by ROLLS ROYCE at Apogee 2018, BITS Pilani:** Designed a Hybrid Powered Airliner, achieved a reduction in CO2 emissions and noise by 25% and 32% respectively.

- **Presented a paper at 11th National Conference on Aerospace and Defence Mechanisms organised by INSARM, ISRO and DRDO at Hyderabad, India held in November, 2018:** Presented a paper on "Design and Modeling of Span Wise Adaptive Wings for a Reconfigurable VTOL"

OTHER ACHIEVEMENTS

- **Student Representative for WePOWER - Women in Power Sector Professional Network in South Asia:** Selected by World Bank Group to represent India at the South Asian Conference held in February, 2019.
- **National Cadet Corps 'A' Certificate:** Awarded by Ministry of Defense, Government of India.
- **Certificate for 'Excellent work in the field of Cleanliness Awareness and Environment Protection' :** Awarded by District Administration, Government of Rajasthan, India on 72nd Independence Day of India.