

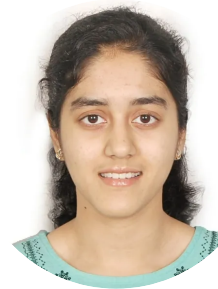
# Disha M D

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*A zealous and empathetic mechanical engineering graduate with a steadfast focus on addressing sustainability and climate change issues. An ardent learner and believer in the power of individuals in making a difference.*

## EDUCATION

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### **B.Tech in Mechanical Engineering**

*PES University*

**CGPA 8.16**, Specialization in Thermo-Fluids engineering.

Aug 2018 – May 2022

Bengaluru, India

### **Pre-University (11th and 12th Grade)**

*Athani Composite Pre-University College*

**Score - 94.16%**

Jun 2016 – Mar 2018

Davangere, India

### **CBSE Class 10th Examinations**

*Bapuji Higher Primary English Medium (CBSE) School*

**CGPA 10**

Mar 2016

Davangere, India

## PROFESSIONAL EXPERIENCE

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### **Project Assistant**

*Combustion Gasification and Propulsion Laboratory (CGPL),  
Indian Institute of Science (IISc)*

Jul 2022 – present

Bengaluru, India

Work involved the following studies and experiments on Polymer Electrolyte Membrane Fuel Cells (PEMFCs) and Solid Oxide Fuel Cells (SOFCs) -

- Testing, characterization and performance analysis of fuel cells using polarization curves.
- Studies on the influence of component materials, parametric variation of fuel and oxidizer flow rates, temperature, and humidification on fuel cell performance.
- Electrochemical Impedance Spectroscopy (EIS) experiments to study the total impedance of the fuel cell.
- Analysis of PEM fuel cell performance utilizing Hydrogen produced through Biomass Gasification in the lab.

## INTERNSHIP EXPERIENCE

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### **Project Intern**

*Combustion Gasification and Propulsion Laboratory, Indian Institute of Science*

Mar 2022 – May 2022

Bengaluru, India

- Conducted testing and performance analysis of Polymer Electrolyte Membrane Fuel Cells.
- Carried out literature survey on hydrogen as a fuel, fuel cell technologies, components and electrochemistry of fuel cells.

## **Internship - 7th semester**

*PES University*

Sep 2021 – Dec 2021

Bengaluru, India

- Collection of illumination data on campus, urban solar street light planning based on Bureau of Indian Standards (BIS) road lighting codes.
- Light wattage, solar panel and battery sizing calculations.
- Feasibility analysis and cost comparison between regular LED and solar LED street lighting for the potential installation on the campus of PES University, Bengaluru.

## **PROJECT WORK**

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### **Analysis of Flow Through Small Ducted Wind Turbines for Rooftop**

Jan 2021 – Dec 2021

#### **Applications**

*PES University, Bengaluru, India*

An extensive literature survey was carried out on ducted wind turbines (DWTs) and wind flow modelling through wind turbines. Local wind velocity data collection, power requirement calculations and design calculations were carried out for different types of ducts, namely simple diffuser, flanged diffuser, and airfoil cross-section diffuser. A two-dimensional axisymmetric model was chosen for fluid flow analysis on ANSYS Fluent. Various geometrical parameters of the ducts, such as inlet angle, length of the diffuser, and area ratio were varied and velocity variation across the duct was analyzed. The airfoil cross-section diffuser provided the best velocity augmentation among the chosen designs for given inlet velocities.

## **SKILLS**

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### **Softwares**

ANSYS Fluent, MATLAB, Python, C, Microsoft Office

### **Soft skills**

Content writing, communication and outreach

## **COURSES AND CERTIFICATIONS**

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<b>Understanding Research Methods   Coursera</b>	May 2021
<b>Energy: The Enterprise   Coursera</b>	Aug 2020
<b>Our Energy Future   Coursera</b>	Aug 2020
<b>Communicating Climate Change and Health   Coursera</b>	Aug 2020
<b>Crash Course in Energy   Energy Club, IIT Bombay</b>	Aug 2020
<b>The Sustainable Development Goals - A global transdisciplinary vision for the future   Coursera</b>	Jul 2020
<b>International Workshop on Recent Advances in Thermal Engineering (IWRATE 2020)   BITS Pilani</b>	Jul 2020
<b>Introduction to Sustainability   Coursera</b>	Jul 2019
<b>Basics of Rocket Propulsion - PESU I/O Course   PES University</b>	May 2019
<b>Solid Edge - PESU I/O Course   PES University</b>	Dec 2018

## **VOLUNTEERING ACTIVITIES**

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<b>The Changemakers' Society club (CMS), PES University</b> Research volunteer and part of the core team involved in planning for waste management on the university campus	Aug 2020 – Mar 2022
<b>Chatramitra Programme, PES University</b> Part of a team of students visiting a government school on a weekly basis to train students of class 7th for a government-funded scholarship exam	Aug 2019 – Mar 2022
<b>World's Largest Lesson, AIESEC India + The Changemakers' Society</b> Conducted activities for Baldwin Boys High School students to introduce them to the Sustainable Development Goals (SDGs)	Aug 2019
<b>Aatmatrisha Fest, PES University</b> Involved in organizing and conducting a game event-MXC as part of the college fest, Aatmatrisha	Mar 2019
<b>Collegiate Social Responsibility (CSR) club, PES University</b> Participated in volunteering for a clean-up drive, blood donation camps, visit to a special school to conduct activities for the students	Sep 2018 – Mar 2020
<b>The Amateur Scientist (TAS) fest, PES University</b> Volunteered for conducting and managing registrations for a day-long science fest conducted for high-school students	Aug 2018

## **SPORTS**

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<b>PES University Throwball Team</b> <i>Member of PES University Throwball Team A and Team B for multiple throwball events/tournaments -</i>	Sep 2018 – Mar 2020
i) Inter-Collegiate Throwball Tournament, BNMIT, Bengaluru - Sept 2018	
ii) Infini Sports Fest, PES University, Bengaluru - 2018 and 2019	
iii) Revels'20 fest throwball event, Manipal University, Manipal - March 2020	

## **ADDITIONAL INFORMATION**

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### **Languages**

English, Kannada, Hindi

### **Interests**

Literature, languages, music, sports, tourism and social service