

# DHATRI VAGDEVI MANDAVA

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Address: Vijayawada, India

## ABOUT ME

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Completed masters and has more than one year experience in the aerospace field. A keen individual who is striving to improve knowledge in every possible situation.

## EDUCATION AND QUALIFICATIONS

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**Master of Science (Aerospace Engineering)** *University of Sheffield, United Kingdom* [26/09/2022 – 26/09/2023]

**Relevant Modules:** Aerospace Propulsion, Aircraft Design, Finite Element Analysis, Aerodynamic Design, Advanced Material Manufacturing, Aircraft Dynamics & Control, Multi-sensor & Decision Systems

**Bachelor of Technology (Aeronautical Engineering)**

*Hindustan Institute of Technology and Science, India*

[14/06/2016 – 30/04/2020]

**Relevant Modules:** Propulsion, Structures, Aerodynamics, Aero Engineering Thermodynamics, Mechanics of Machines, Aircraft Materials, Heat Transfer, Vibrations & Aeroelasticity, Composite Materials & Structures, Fluid Mechanics & Machinery, Solid Mechanics, Numerical Methods, Computer Programming(C)

## WORK EXPERIENCE

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**Aeronautical Engineer & Junior Aeronautical Engineer**

*MAGNUMWINGS, India*

[19/10/2020 – 23/01/2022]

**Professional:**

- Researched the design of control surfaces of the aircraft, designed and tested them for the prototype Unmanned Aerial Vehicle (UAV).
- Attended flight tests for different types of UAVs like fixed wing UAV, Trainer and Glider for the performance of the UAV.
- Developed conceptual and preliminary design of the UAV.

**Technical:**

- Report Writing (project proposals, installation reports and test results documentation).
- Analysed data of the experiments, drafted reports based upon the results of experimentation and presented it to the Manager.

**Intern**

*Air India Engineering Services Private Limited, India*

[25/11/2018 – 21/12/2018]

- Trained with different aircraft systems on A320 family aircraft and ATR 72 aircraft.
- Learnt about base maintenance process and procedures on different components of the aircraft.

## PROJECTS

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**Oxygen Rich Layer formation in Titanium Alloys, MSc Dissertation**

[10/12/2022 – 13/09/2023]

- Prediction of formation of oxygen rich layer in the Titanium based alloys and their transformation from being ductile to brittle.
- Study of propagation of the crack and changes in microstructure of the material which affects the properties of the material due to oxygen rich layer formation.
- Prediction of life cycle of the material due to oxygen rich layer formation.

**Design and Manufacture of Tranquillizer Drone for Wildlife Support, MSc Group Project** [26/09/2022 – 20/05/2023]

- Developed and produced a UAV prototype that is used to tranquilize animals which in turn to reduce the cost and manual work for wildlife ecologists by decreasing the human casualties in extreme cases.
- Serrations on cowls will be used to lessen noise produced by vortices, together with noise-suppressing propellers and custom-designed structures with the necessary technology to have a steady flight without frightening wild animals.

## **Determination of combustion and evaporation characteristics of an organic gel fuel**

*Bachelor's Thesis*

[ 06/2019 – 04/2020 ]

- Determined fuel and combustion characteristics of the organic gel fuels such as kinematic viscosity, flash and fire point, and evaporation characteristics from the Redwood Viscometer, Flash and Fire point apparatus and setup.
- The characteristics are determined from experimental analysis by using different fuels made mainly with the chemicals triethanolamine, kerosene, glycol, ethanol and a gelling agent methylcellulose.
- Thesis published in materials proceedings today, volume 33. <https://doi.org/10.1016/j.matpr.2020.06.565>.

## **CONFERENCES AND SEMINARS**

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### **National Workshop on "Advances in Aircraft Structural Design"**

[ 27/08/2019 – 29/08/2019 ]

[ Hindustan Institute of Technology and Science ]

- Learnt about different types of structures of the aircraft components and their failures.

### **National Conferences on Aerospace Technology (NCAT)**

[ 26/09/2018 – 27/09/2018 ]

[ Hindustan Institute of Technology and Science ]

- Presented on topic “Applications of Advanced Polymer Materials in Aircraft and Components”.

## **INDUSTRIAL EXPOSURE**

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### **Satish Dhawan Space Centre SHAR, ISRO, India**

- Widened knowledge on how rocket launches from the launch pads and their mechanisms used in the SHAR.
- Visited different types of rocket launch pads and learned their usage for different types of rockets.

### **Jakkur Aerodrome, India**

- Trained on the flying of the aircrafts for one day.
- Understood how Air Traffic Control sent signals and received signals from the aircraft during flying.

## **TECHNICAL SKILLS**

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### **Trained in computer modelling and simulation software CATIA V5.**

[ 08/03/2020 – 09/06/2020 ]

Part Workbench, Assembly Constraints, Wire frame, Surface modeling, Sheet Metal Design.

### **Trained in Product Design from Cad Center training Services**

[ 20/05/2018 – 05/07/2018 ]

Product Design in AUTOCAD and SOLIDWORKS software.

## **PERSONAL STRENGTHS**

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### **Proactive**

Will plan in every circumstance to act accordingly by taking the necessary measures to reduce the impacts caused by failing to do so.

### **Adaptability**

Can react quickly to the situations that occur around me and can easily adapt to any environment or role under any conditions.

### **Team management**

I can operate in a workplace with ease, and I'll share my ideas and accept advice from team members. I'll also listen and give feedback to other team members to improve my team management abilities.

## **DIGITAL SKILLS**

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**Microsoft Excel, Microsoft Word, Microsoft Office, Microsoft PowerPoint**

## **LANGUAGES**

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**Telugu, English, Hindi, German(A1)**