# VISVESVARAYA TECHNOLOGICAL UNIVERSITY,BELAGAVI– 590 018

AMICRO PROJECTREPORTON

## "Weather Station Airship"

**Submitted By,**


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ALVA'S
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**DEPARTMENT OF MECHANICAL ENGINEERING**

**ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY**

**MOODBIDRI-574225, KARNATAKA**


**2020–2021**

# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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ALVA'S
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## DEPARTMENT OF MECHANICAL ENGINEERING

## CERTIFICATE

This is to certify that the Micro-Project entitled "Weather Station Airship " has been Successfully Completed

By

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The bonafide students of **Department Mechanical Engineering, Alva's Institute of Engineering and Technology,** affiliated to VISVESVARAYA **TECHNOLOGICAL UNIVERSITY, BELAGAVI,** during the academic year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been in corporated in the report. The report has been approved as it satisfies the academic requirements in respect of Micro-Project work prescribed for Bachelor of Engineering.

Mr. M.R.Ganesh
**Mini ProjectGuide**

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# ABSTRACT

Weather forecasters often require data from upper atmosphere for more accurate weather forecasting. Atmospheric pressure, temperature, wind speed and wind direction play an important role in forecasting weather conditions more accurately.

For this purpose we here suggest a smart weather monitoring station that uses a zeppelin mechanism to send an array of weather sensors into the upper atmosphere for live atmospheric data transfer.

The Live Upper Atmosphere weather station offers a wide variety of advantages including:

Ability to reach any height as controlled by user

Long Range using IOT Connectivity

Measures Atmospheric pressure, temperature, humidity, wind direction and speed

Get all data to online portal for analysis

Live Data Monitoring

IOT Controller for controlling height and movement of Station

Long Duration Monitoring

The zeppelin drone uses GSM connectivity to get unlimited range of flying. It uses cell towers for internet connectivity. The location of the zeppelin is constantly transmitted to the server and can be viewed online over IOT using GPS tracking. Also an on board camera transmits live footage of the zeppelin at all times. The user may navigate and control the drone lift and movement as desired online. The propeller motor is with a servo mount is used to control the flight direction of zeppelin.

The system makes use of a compressed helium tank with 2 valves to drive air in and out of the compressed air tank. The compressed helium is pushed into the air balloon and reversed compressed in to tank as and when needed to control the zeppelin height.