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For SPANDANA CREDIT SOUHARDA SAHAKARI NIYAMITHA

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MEMORANDUM OF UNDERSTANDING
Between
Department of EEE
Sir. MVIT, Bangalore
Bangalore
AND
Harmonizer India Pvt Ltd.,
BANGALORE

PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevarayanagar, Hunasamaranahalli,
International Airport Road, BANGALORE-562 157

HARMONIZER INDIA PVT. LTD.
BANGALORE

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.

This Memorandum of Understanding is entered into on this **5th day of January 2022** between

Department of EEE, Sir. M Vishweswaraya Institute of Technologies (hereinafter called SMVIT) situated at Hunesemaranahalli, Bangalore -560056, Karnataka and represented by Principal **Dr.V R Manjunath** having its office at Hunasamaranahalli,Bangalore-562157 (hereinafter referred to as "SIR MVIT" which expression shall, unless excluded by or represent to the context be deemed to include its successors in office and assigns) of the ONE PART.

and

Harmonizer India Pvt Ltd., 557, 15th Cross, 1st Main, RHCS Layout, Annapurneshwari Nagar, Nagarbhavi 2nd stage, Bangalore – 560091 and represented by M/s. Harmonizer India Pvt Ltd., founded by **Mr. M.R. Srinivas**, **Mr. Manoj Soni**, (hereinafter called "Harmonizer") which expression shall include its successors and permitted assignees with its registered office at Bangalore, of the OTHER PART

1. PREAMBLE

SMVIT is one of the leading Engineering college in Karnataka, located at new airport road, Hunasemaranahalli, Bangalore under VTU.

Founded in 1986, and named after Bharat Ratna Sir.Mokshagundam Vishveswaraya, the Institute is affiliated to Visvesvaraya Technological University (VTU), Belgaum and is accredited by AICTE.[1] It offers graduate and postgraduate courses.

The institute is one among the top colleges in Karnataka that most preferred by Engineering aspirants across the country.

M/s. Harmonizer India Pvt Ltd., founded by **Mr. M.R. Srinivas**, Mr. Manoj Soni, with its registered office at Bangalore, India, was established in 2019 to provide various solutions related to Power Quality, Power System, IoT Solutions, Machine Learning/AI solutions for Engineering Domain (such as Electrical, Electronics, Communication, Mechanical, Civil, CSC etc), Training, Workshops etc. The Harmonizer is having a Registered office in Bangalore, Abudhabhi-UAE and Canada.

Harmonizer has state of the production facilities in UAE & India to produce state of the art technologies in Power Solutions, IIOT Products, EV Chargers, Smart meters, AI Based Hardware / Software solutions for Industry & Building application.

Harmonizer vision is to provide knowledge driven / knowledge centric solution for customer to enable customer design and business sustainability.

Harmonizer is also keen to work closely with Academic institutions to bridge the knowledge gap between Industry & Academic institutions.

Harmonizer is having a collective expertise of more than 60 years both technically and in the business process.

2. OBJECTIVE

The Core objective is to establish a long-term linkage with Harmonizer to reduce the knowledge gap between Company expectations (practice) and academic offerings (theory) by direct involvement of Company to attain a symbiosis.

Thereby, Company, Institution, Faculty, Students and Society stand to gain with a synergistic partnership. The Institutions stand to gain by way of updated curricula, consultancy and R & D, source of manpower for employment, societal relevance, and most importantly acquisition of brand name/equity; Company stands to gain by way of availability of employable manpower pool, and increased productivity, deploy/manage Learning Center; faculty stand to gain by way of exposure to latest Company practices for more effective teaching-learning processes, students stand to gain through hands-on training, reduction of learning curve in industrial practices, Internship topics/execution, registering in Learning center to have Industry oriented workshops on various topics; and, society stands to gain by way of improved quality of goods and services.

3. SCOPE

(a) The Key benefits from Harmonizer to MVIT are:

- Partnering with Institution in establishing ***i-Labs*** (Intellectual laboratories) and incubation centers
- Bridge the Gap between Academia and Industries
- Participating in joint R&D activities and consultancy
- Providing assistance for improving employability including internships, entrepreneurial training specialized skill training required by Company and placement opportunities.
- Participating in bodies as the Board of Governors, Academic Council, Boards of Studies, Industry-Institute-interaction Cell and College Research Mentoring Cell
- Participating in curriculum design, development and update of the engineering programs
- Collaborating in joint educational/Certification and extension programs
- Commercialization of technologies and products from joint intellectual property development.

- Organizing joint professional activities like conferences, workshops and seminars.
- Organizing add-on programs in emerging areas.
- Providing opportunities for student groups to undertake problem-solving projects
- Supporting student research projects
- Training students, faculty and technical staff in new technologies and processes with the help of ***i-Labs***

(b) *i - Labs*:

- Here is a significant knowledge gap between Academia & the Industry, due to which the industry is having exertion in selecting Engineering Graduates for specific job.

- i-Labs enables to bridge the gap between Academia and Industry by bringing both on same platform.

- i-Labs is designed for collaborative "Learning – Innovation – Upgradation" for Faculty and Students about Industry oriented technologies and training.

Objective of *i-Labs*:

✓ Enable Students, Teachers to:
- Learn new concepts related to Industries
- Orient towards Industrial Technologies
- Collaborative R&D / Innovation on core domain Electrical, Electronics, Mechanical, Civil, Communication and Computer Science Engineering
- R&D / Innovation on EMS, Meters, IoT Systems (for Engineering domain), Power Quality, Power System, Safety, Reliability, Machine Learning, AI etc
- Provide a great platform for the students to work on Internship topics.

✓ Bridge the Gap between Academia and Industries

✓ Enable Students to prepare for Interviews due to practical exposure

✓ Enable Teachers / Students to work on patents in an open environment in collaboration with Harmonizer

- ✓ Networks Issues
- ✓ Power Quality
- ✓ Machines
- ✓ Earthing system
- ✓ Load Flow
- ✓ Unbalance
- ✓ MV/LV networks
- ✓ Applications

Electrical

- ✓ PCBs
- ✓ Components
- ✓ Electronics meters
- ✓ Transducers

Industrial Electronics

- ✓ Protocols
- ✓ Gateways
- ✓ Blue tooth
- ✓ Zog Bee
- ✓ WIFY
- ✓ TCPIP
- ✓ Modbus

Telecommunication

- ✓ Machine Learning for Engineering
- ✓ AI for Engineering
- ✓ IoT Solutions
- ✓ EMS
- ✓ Cloud systems
- ✓ Python coding
- ✓ Embedded C Coding

Computer Science

Collaborating Learning and Innovation across the domain

Benefits for Students:

- ✓ Exposure to Latest Industry Trends
- ✓ Practical guidance / exposure to Electrical, Electronics, Telecommunication and Computer Science application
- ✓ Machine Learning Concepts for Engineering domain
- ✓ AI Learning concepts for Engineering domain
- ✓ Collaborative learning between the domain
- ✓ Training by Global Industry Experts
- ✓ Internship options for Toppers
- ✓ Enable to face Interview with enriched knowledge about the Industry

Benefits for College / Institution / University:

- ✓ Exposure to Latest Industry Trends
- ✓ Practical guidance / exposure to Electrical, Electronics, Telecommunication and Computer Science application for Faculty
- ✓ Machine Learning Concepts for Engineering domain
- ✓ AI Learning concepts for Engineering domain
- ✓ Collaborative learning between the domain
- ✓ Training by Global Industry Experts
- ✓ Enhanced Teaching abilities
- ✓ Brand image and contribution to the Industry
- ✓ Enhanced Campus selection
- ✓ Continuous Revenue from the Lab

What we need from Institution?

- ✓ Space to set up i-Labs (about one class room size)
- ✓ 3phase power connection
- ✓ Interiors for the Lab
- ✓ Investment of about INR 1,00,000/- for basic components as per the Annexure 1.

What will Harmonizer provide?

- ✓ Embedded components (Micro controller, Micro-processor, PCBs, Sensors, Actuators etc)
- ✓ Software tool for Machine Learning / AI (Embedded C, Python, Anaconda etc)
- ✓ EMS
- ✓ Experts for Training the students
- ✓ Enable R&D / Innovation across the domain
- ✓ Enable Patent filing
- ✓ Internship for Toppers in any of the office of Harmonizer (Bangalore, UAE or Canada).
- ✓ Certificate of participation

Fee to enroll to iLabs:

✓ Upto 500 Students	=	INR.1000/- per student per semester
✓ 501 to 1000 Students	=	INR.900/- per student per semester
✓ Beyond 1000 students	=	INR 800/- per student per semester

Revenue Sharing:

Sir MVIT	=	25% of the Fee
Harmonizer	=	75% of the Fee

4. GENERAL

- ➢ This MOU shall enter in force upon signature by both Parties and remains in force, unless terminated earlier by either Party upon ninety (90) days, written notice to the other Party.
- ➢ The termination this MOU shall not affect the validity or duration of projects under this MOU that are initiated prior to such termination.

5. MONITORING AND IMPLEMENTATION

Coordination Committee consisting of The Head of the Department, one senior faculty member of Department of EEE, MVIT and an officer nominated by the Harmonizer will look into the monitoring and implementation of the various aspects of the MOU. An annual review will be conducted to monitor the progress and in furtherance of the activities covered under the MOU.

6. SIGNED IN DUPLICATE

This MOU was executed in duplicate with each copy being an official version of the Agreement and having equal legal validity with effect from 5th January 2022.

Now this copy is made on stamp paper for compliance of statutory authorities such as AICTE, UGC, NIRF, NBA and NAAC etc.

BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.

For Harmonizer India, Bangalore

HARMONIZER INDIA PVT. LTD. BANGALORE

Signature :
Name : **M.R.Srinivas**
Designation: **Chief Technical Officer**
Place : **Bangalore**
Date : 05-01-2022

Witness:

1. LOHIT R HABBU
2. JAGADEESAN.V

For SIR MVIT Bangalore

Signature :
Name : **Dr. V R Manjunath**
Designation: **Principal**
Place : **Bangalore**
Date : 05-01-2022

PRINCIPAL
Sir M.V.I.T., Bangalore-562 157.

Witness:

1. Dr. H.L. SURESH
2. Dr. M.S. SURESH.

Harmonizer
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Certificate of Internship

This is to Certify that

ROHAN KEDIA, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

---

Method to detect, measure, analyze Temperature, Vibration of Electric motor using IIoT and Machine Learning technologies

21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

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Certificate of Internship

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NILESH SAHAY, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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21st Aug – 20th Sept 2022

M.R.Srinivas - CTO

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Certificate of Internship

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KAUSHIKI, *6th Semester-EEE at sir.MVIT*

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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21st Aug – 20th Sept 2022

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Saiymeen Fatima,
6th Semester-EEE at sir.MVIT
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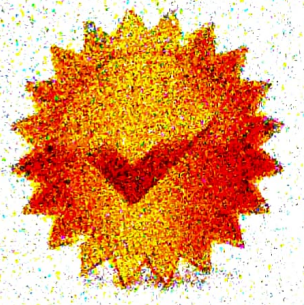

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AMAN SINGH, *6th Semester-EEE at sir.MVIT*

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Tanya Singh,
6th Semester-EEE at sir.MVIT
has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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ALI AHMED, *6th Semester-EEE at Sir.MVIT*

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This is to Certify that
Sowmyashree K, *6th Semester-EEE at sir.MVIT*
has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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VARUN B BANAKAR, *6th Semester-EEE at sir.MVIT*

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SONAL KUMAR, *6th Semester-EEE at sir.MVIT*

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ANUPRIYA K V, *6th Semester-EEE at sir.MVIT*

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CHARAN PB, *6th Semester-EEE at sir.MVIT*

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SYED IRFAN, *6th Semester-EEE at sir.MVIT*

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This is to Certify that

Reet Gupta, 6th Semester-EEE at sir.MVIT

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YESHWANTH RAJ, *6th Semester-EEE at sir.MVIT*

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This is to Certify that

ISHRATH KHUSHBUDA, ***6th Semester-EEE at sir.MVIT***

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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M.R.Srinivas - *CTO*

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PRATYUSH RAJ PANDEY, *6th Semester-EEE at sir.MVIT*

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SREEJITH C S, *6th Semester-EEE at sir.MVIT*

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SWAPNA N, *6th Semester-EEE at sir.MVIT*

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HARSHPRAKASH, *6th Semester-EEE at sir.MVIT*

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CHAITRA C, *6th Semester-EEE at sir.MVIT*

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Certificate of Internship

This is to Certify that

Anmol Anand, 6th Semester-EEE at sir.MVIT

has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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SRIKANTH M, *6th Semester-EEE at sir.MVIT*

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This is to Certify that
Suyesha Bhattacharjee, *6th Semester-EEE at sir.MVIT*
has attended the Internship program conducted by Harmonizer India Pvt Ltd.,

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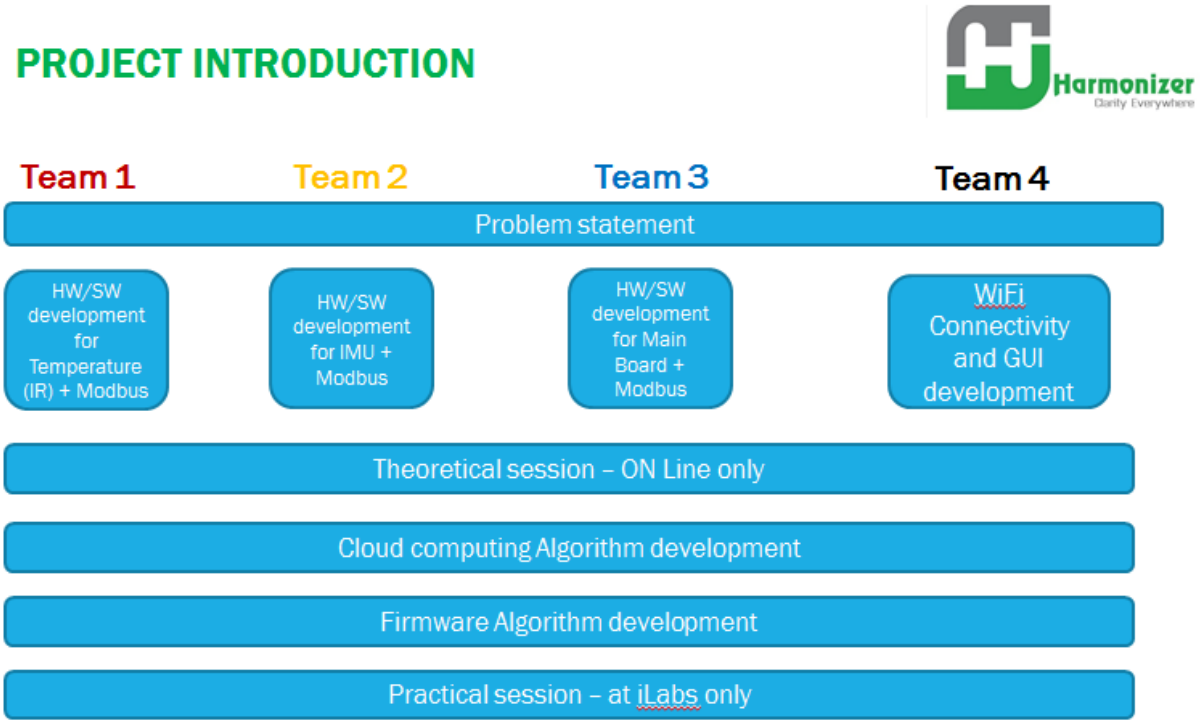


TASK PERFORMED

Week 1- Project introduction

Week 2- Problem assigned

Week 3- Implementing Inertial Measurement Unit (IMU) sensor

Week 4- Solution Implemented & Output Result

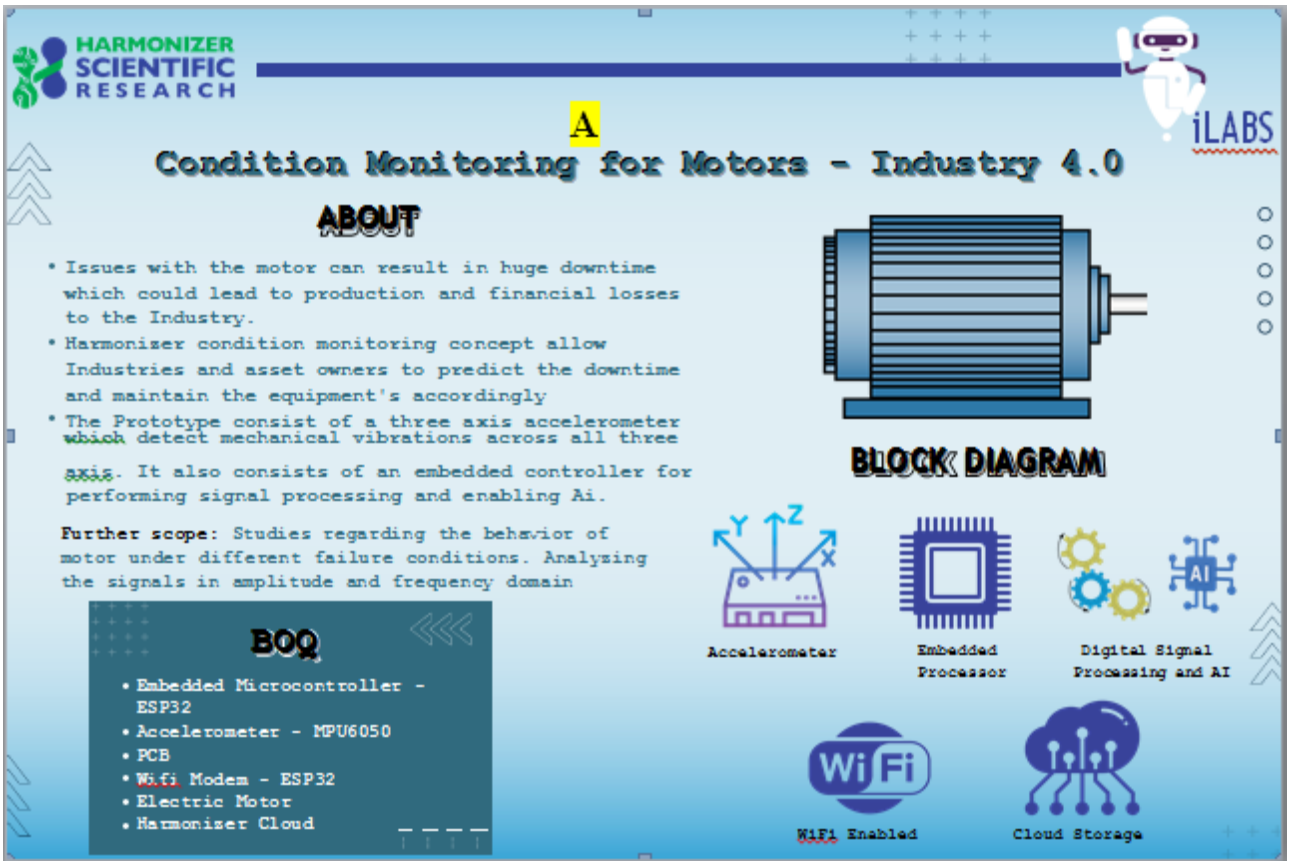
COMPLETED PROJECT LIST IN ILAB -2022-23

A. Condition Monitoring for Motors-Industry 4.0

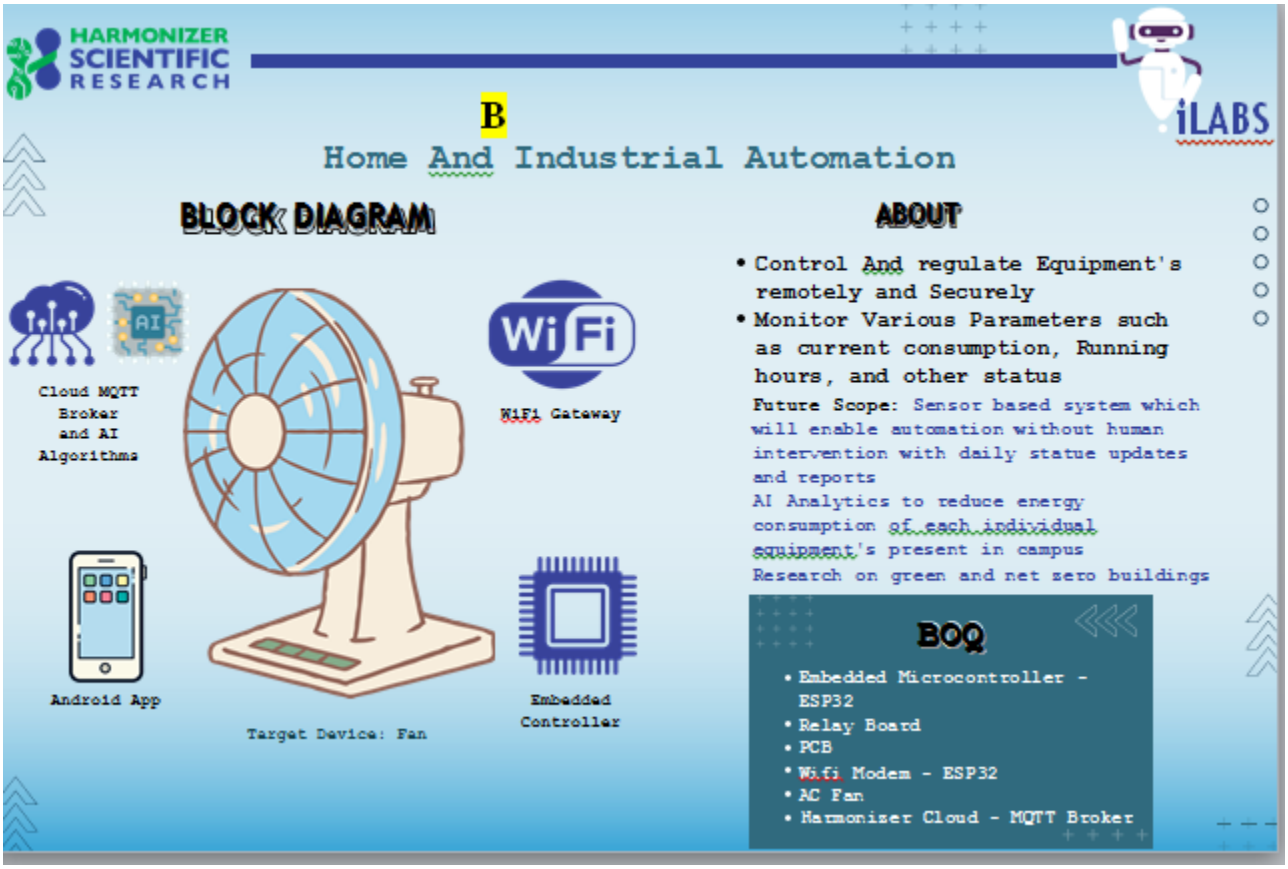
B. Home and Industrial Automation

C. Transformer Condition Monitoring-Industry 4.0

A. Condition Monitoring for Motors-Industry 4.0



B. Home and Industrial Automation



C. Transformer Condition Monitoring-Industry 4.0