



MEMORANDUM OF UNDERSTANDING

Between

VIT Alumni Batch of 1996 Instrumentation members comprising of:

1. **Mr. Vaibhav Joshi**
2. **Mr. Sachin Deodhar**
3. **Mr. Rajesh Iyer**
4. **Mr. Mandar Karandikar**
5. **Mr. Ashish Rane**
6. **Mr. Sudhindra Rao**
7. **Mr. Ashish Rane**
8. **Mr. Ambar Rasal**

and

Vishwakarma Institute of Technology
Pune, INDIA

This Memorandum of Understanding (MoU) is drawn up and agreed-upon to establish cooperation and a long-term working relationship between a group of Vishwakarma Institute of Technology alumni / Ex-VIT'ians from 1996 of Instrumental Engineering batch (comprising Mr. Vaibhav Joshi, CEO, GlobalTech.com) hereinafter referred to as **VITPune_Alumni 1996** and Vishwakarma Institute of Technology, Pune hereinafter referred to as **VIT, Pune**.

PURPOSE

VITPune_Alumni 1996 wish to promote and support innovative projects of Instrumentation Engineering students. To enable this endeavor, **VITPune_Alumni 1996** wish to donate a sum of INR 1,00,000/- (Rs. One Lakh Only) that will be utilized towards the "Innovative Project Support Scheme".

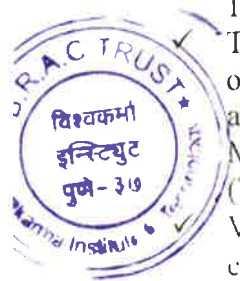
SCOPE OF ACTIVITIES: VIT PUNE

The "Scope of Activities" describes actions by the part of VIT, Pune to establish mechanism and sustain the said award scheme

- ✓ VIT Pune will facilitate deposit of the amount of INR 100,000 /- by cheque in 3 installments over the duration of the project (6 to 12 months) from the VIT Pune_Alumni 1996 in the research and development related account

The Instrumentation Engineering Department led by Prof. Dr. Sondkar will provide objectives, scope, roadmap, funding requirement and milestones of each of the project along with the details of each of the student and Principal Investigator (Prof. Manisha Mhetre) who will be the point of contact and is responsible for execution of the project. (The details are Annexed)

VITPune_Alumni 1996 will provide contact person name who will be the point of contact for providing project updates and review





- ✓ The amount of INR 100,000/- will be strictly utilized towards completion of the project in terms of hardware and related aspects.
- ✓ The said amount shall not be used for purchase of any laptops, computers, printers etc.
- ✓ The PI and the said point of contact will decide frequency of review
- ✓ The PI will be responsible to provide expenditure details substantiated by appropriate bills / documents processed through the Instrumentation Engineering Department head.
- ✓ The decision regarding the Intellectual Property generated, its protection, commercialization will be arrived at through mutual discussion through consensus.

SCOPE OF ACTIVITIES: VITPUNE_ALUMNI 1996

The "Scope of Activities" describes actions by the part of VITPune_Alumni 1996 to initiate the said project support scheme.

- ✓ VITPune_Alumni 1996 will provide a cheque of INR 1,00,000 (Rupees One Hundred Thousand) in the name of Vishwakarma Institute of Technology
- ✓ VITPune_Alumni 1996 will provide name of the point of contact for the project reporting
- ✓ VITPune_Alumni 1996 shall lay the outline, success criteria for the approved projects
- ✓ Taking into consideration time availability and convenience, VITPune_Alumni 1996 will mentor students from the project

DURATION, TERMINATION AND AMENDMENT

- ✓ This MoU will be effective from the date of signing by both parties
- ✓ Either party may terminate this MoU by giving six months advance notice..
- ✓ The provisions of this MoU may be amended at any time with mutual written consent

CONTACT INFORMATION

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Head, Instrumentation Engineering Department
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Mr. Vaibhav Joshi,
CEO, VGlobalTech.com.
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Cell: +1(321)947-7777

This MoU is prepared in two identical copies. Each party holds one duly signed original copy

Signed for and on behalf of:

Vishwakarma Institute of Technology

Prof. (Dr.) Rajesh Jalnekar
Director



VITPune_Alumni 1996

Mr. Vaibhav Joshi
CEO, VGlobalTech.com

Mr. Sachin Deodhar

Mr. Sudhindra Rao

Annexure I

Project I : IOT based crop management system for farmers

As we know, Indian farmers are facing many environmental and manmade problems. Most of the Indians farmer lives in rural areas and they are still suffering from problems like load shedding, suitable supply of water and load shedding and many other problems, So, there is a need of a device development for the farmers which can monitor and control Farm's attributes. This project aims at a development of a device which can be useful to farmers. This device consists of different sensors measuring atmospheric and soil parameters, interfaced with microcontroller and wireless module. Using wireless module, Sensor's data can sent to farmer's cell phone through app development or webpage. This system uses sensors like humidity, moisture and temperature measurement and controls these parameters. For communication between device and cloud, MQTT protocol is used which is widely used for IoT purposes. MQTT protocol is lightweight protocol and implementation is simple. Using this device, farmers can get more information and can analyze their farm attributes thoroughly and it will save their time in crop management. Soil health management using different parameters measurements, water management, pump and motor control, fertilizer distribution can be managed by the farmers to have good crop yield.

Group 1 (B. Tech and M. Tech) Instrumentation and Control	Humidity measurement and motor control and app development, Temperature measurement and IOT system and protocol development, Smart Grain storage system	PI- Manisha Mhetre
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Project 2: IOT based SMART Medical Jacket with Energy Harvesting

In day to day life biomedical parameters tracking is very important. In our living environment pollution and harmful gasses are present in large amount which affect our health notably. Human beings life span has been reduced from ancient times because of health issue. This project aims at developing a smart system placed in Jacket for recording medical parameters, analyzing it and keeping a track of it for diagnosis. This project aims at designing a smart jacket system with measurement of three important physiological parameters as ECG (heart rate), temperature. Measurement will be carried out with the three sensors placed in the jacket. After processing the signal it is given to the Microcontroller for analysis and localized display. The system uses AD8232 ECG module for obtaining the heart rate, LM35 for temperature and Pizeo electric disc for reparation rate measurement. Use of IOT technology will help in data collection and recording. Sensors data can be displayed on LCD and is given to mobile app developed on mobile using required serial communication and can be uploaded to server. Real time application of this jacket can be used in hospitals for monitoring pregnant women, elderly people and patients suffering from fever. Also this project aims at energy harvesting using the sensors used for measurement. Project aim at real time data collection and measurement with verification with doctors.

Group 2 (B. Tech and M. Tech) Instrumentation and Control	Body temperature measurement, Respiratory rate measurement, ECG measurement and IOT implementation	PI- Manisha Mhetre CO PI- Shilpa Sondkar
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DIRECTOR
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