

# DESIGN AND DEVELOPMENT OF SMART ROBOTIC ARM FOR HANDLING LOW WEIGHTED OBJECTS

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

JASWANTH B S	1KG18EC024
MOHIT SINTRE H	1KG18EC034
NANDAKUMAR M N	1KG18EC035
SANJAY B	1KG18EC048

Under the Guidance of

**Mr. Puneeth S**  
Assistant Professor, Dept. of ECE  
K S School of Engineering and Management



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Design and Development of Smart Robotic Arm for Handling Low Weighted Objects** is a bonafide work carried out by

**JASWANTH B S            1KG18EC024**  
**MOHIT SINTRE H        1KG18EC034**  
**NANDAKUMAR M N     1KG18EC035**  
**SANJAY B                1KG18EC048**

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**  
11/1/2022

**Head of the Department**

**Principal/Director**

**Mr. Puneeth S**  
Assistant professor  
Dept. of ECE

**Dr. Girish V Attimarad**  
Head & Professor  
Dept. of ECE

**Dr. K. Rama Narasimha**  
KSSEM

**Examiners**

**Dr. K. RAMA NARASIMHA**  
Principal/Director  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

**Dr. Kasthik P**  
Name and Signature of Examiner-2

# IMPLEMENTATION OF VEHICLE TRACKING AND LOCKING SYSTEM USING GPS & GSM

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

MAYAMMA N	1KG18EC033
RAKSHITHA M R	1KG18EC044
ABHILASH P R	1KG19EC401
PAVAN V	1KG19EC406

Under the Guidance of

**Mr. Sasindran Prabhu**  
Associate Professor, ECE, KSSEM  
K S School of Engineering and Management



**KSSEM**  
K. S. School of Engineering and Management

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Implementation of Vehicle Tracking and Locking System using GPS & GSM** is a bonafide work carried out by

<b>MAYAMMA N</b>	<b>1KG18EC033</b>
<b>RAKSHITHA M R</b>	<b>1KG18EC044</b>
<b>ABHILASH P R</b>	<b>1KG19EC401</b>
<b>PAVAN V</b>	<b>1KG19EC406</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Head of the Department**

**Principal**

*M. Sasindran*

**Mr. Sasindran Prabhu**  
Associate Professor  
Dept. of ECE

*Girish V Attimarad*

**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE  
Professor & Head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

*K. Rama Narasimha*

**Dr. K. Rama Narasimha**  
Dr. K. KSSEM  
Principal/Director  
K S School of Engineering and Management  
Bangaluru - 560 109

**Examiners**

*Girish V Attimarad*  
**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

*Karthik P*  
**Dr. Karthik P**  
Name and Signature of Examiner-2





**IMPLEMENTATION OF PASSWORD AUTHENTICATION  
SYSTEM USING BRAIN WAVE FOR PARALYZED PEPOLE**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>BHANUPRIYA C N</b>	<b>1KG18EC008</b>
<b>J R PAVANAJAKHI</b>	<b>1KG18EC023</b>
<b>TALLURUGOPIPRAVALIKA</b>	<b>1KG18EC059</b>
<b>R YASHAS</b>	<b>1KG17EC060</b>

Under the Guidance of

**Dr. KARTHIK P**

**Professor**

**K S School of Engineering and Management**



**KSSEM**  
K S School of Engineering and Management

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
**2021-2022**





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled "Password Authentication using Brain signals for Paralyzed people is a bonafide work carried out by

<b>BHANUPRIYA C N</b>	<b>1KG18EC008</b>
<b>J R PAVANAJAKSHI</b>	<b>1KG18EC023</b>
<b>TALLURUGOPIPRAVILKA</b>	<b>1KG18EC059</b>
<b>R YASHAS</b>	<b>1KG17EC060</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Head of the Department**

**Principal**

**Dr. Karthik P**  
Professor  
Dept. of ECE

**Dr. Girish V Attimarad**  
Professor & Head,  
Dept. of ECE  
Professor & Head

**Dr. K. Rama Narasimha**  
Principal,  
KSSEM

**Dept. of Electronics & Communication Engineering**  
**K. S. School of Engineering & Management**  
Bangalore-560 109

**Examiners**

**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

**Dr. Karthik P**  
Name and Signature of Examiner-2



# IMPLEMENTATION OF AN EYE TRACKING SYSTEM FOR CURSOR CONTROL

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
In  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>DIVYASHREE S</b>	<b>1KG18EC012</b>
<b>KEERTHI G</b>	<b>1KG18EC016</b>
<b>SAMYUKTHA</b>	<b>1KG18EC047</b>
<b>SHARAN KUMAR M</b>	<b>1KG18EC051</b>

Under the Guidance of

**Mr. Ravikiran B A,**  
Assistant professor, Dept of ECE

**K S School of Engineering and Management**



**KSSEM**  
K.S. Group of Institutions and Management

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

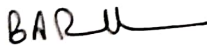
## CERTIFICATE

This is to certify that the project work entitled "Implementation of Eye Tracking System for Cursor Control" is a bonafide work carried out by

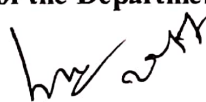
<b>DIVYASHREE S</b>	<b>1KG18EC012</b>
<b>KEERTHI G</b>	<b>1KG18EC016</b>
<b>SAMYUKTHA</b>	<b>1KG18EC047</b>
<b>SHARAN KUMAR M</b>	<b>1KG18EC051</b>

in partial fulfillment for the award of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to Project Work (18ECP83) prescribed for the degree.


**Internal Guide**

  
**Mr. Ravikiran B A**  
Assistant Professor  
Dept of ECE

**Head of the Department**


  
**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE


**Principal**

  
**Dr. K. Rama Narasimha**  
KSSEM

Professor & Head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

**Examiners**

  
**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

  
**Dr. Jayshik P**  
Name and Signature of Examiner-2





# **“Handwritten Text Recognition Using Artificial Intelligence”**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>Aishwarya N Kamaty</b>	<b>1KG18EC003</b>
<b>Sumanth BL</b>	<b>1KG18EC057</b>
<b>O Haritha</b>	<b>1KG18EC039</b>
<b>Aaira Fathima</b>	<b>1KG17EC002</b>

Under the Guidance of

**Sasindran M Prabhu**  
Associate Professor, Dept of ECE  
K S School of Engineering and Management



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109

**2021-2022**





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

## CERTIFICATE

This is to certify that the project work entitled “Hand-Written Text Recognition Using Artificial Intelligence” is a bonafide work carried out by

Aishwarya N Kamaty	1KG18EC003
Sumanth BL	1KG18EC057
O Haritha	1KG18EC039
Aaira Fathima	1KG17EC002

in partial fulfillment for the award of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to Project Work (18ECP83) prescribed for the degree.

**Internal Guide**

**Head of the Department**

**Principal**

*M. Sasi*

**Sasindran M Prabhu**  
Associate Professor  
Dept. of ECE

*hvm 15/7/22*

**Dr. Girish V Attimarad**  
HOD  
Dept. of ECE

*I. T. Rama*

**Dr. K. Rama Narasimha**  
Principal  
KSSEM

**Dr. K. RAMA NARASIMHA**  
Principal/Director

**Examiners**

**Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109**

**K. S. School of Engineering and Management  
Bangalore - 560 109**

*hvm 15/7/22*  
**Dr. Girish V Attimarad**

Name and Signature of Examiner-1

*PR 15/7/22*  
**Dr. K. Rama Narasimha**

Name and Signature of Examiner-2



# LOCALIZATION AND MAPPING OF UNKNOWN ENVIRONMENT USING AUTONOMOUS ROBOT

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>ANIKETHANA N M</b>	<b>1KG18EC005</b>
<b>JYOTISHWAR M</b>	<b>1KG18EC025</b>
<b>PARA LOKESH</b>	<b>1KG18EC041</b>
<b>REVANTH A</b>	<b>1KG18EC045</b>

Under the Guidance of

**Dr. K Senthil Babu**  
**Professor, Dept of ECE**  
**K S School of Engineering and Management**



**KSSEM**  
K.S. SCHOOL OF ENGINEERING AND MANAGEMENT

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
**2021-2022**







**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled “Localization and Mapping of unknown Environment using Autonomous Robot” is a bonafide work carried out by

**ANIKETHANA N M      1KG18EC005**  
**JYOTISHWAR M      1KG18EC025**  
**PARA LOKESH      1KG18EC041**  
**REVANTH A      1KG18EC045**

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Dr. K Senthil Babu**  
Professor  
Dept. of ECE, KSSEM

**Head of the Department**

**Dr. Girish V Attimarad**  
Professor & Head,  
Dept. of ECE, KSSEM

**Principal**

**Dr. K. Rama Narasimha**  
KSSEM

**Dr. K. RAMA NARASIMHA**  
Principal/Director

**Examiners**

Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

K.S. School of Engineering and Management  
Bangalore - 560 109

Name and Signature of Examiner-1

Name and Signature of Examiner-2





# **SOLAR OUTDOOR AIR-PURIFIER USING AIR QUALITY MONITORING SYSTEM**

Project Work Submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfilments of the requirements  
for the award of the degree of

**BACHELOR OF ENGINEERING**

in

**ELECTRONICS AND COMMUNICATION ENGINEERING**

Submitted by

<b>GANESH P K</b>	<b>1KG18EC040</b>
<b>SANTOSH R</b>	<b>1KG18EC049</b>
<b>SRIMANNARAYANA N K</b>	<b>1KG18EC055</b>
<b>SRIRAMSRINIVASAN N K</b>	<b>1KG18EC056</b>

Under the Guidance of

**Mr. Manu D K**  
**Associate Professor**  
**K.S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering  
K.S School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**KSSEM**

**K.S SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION  
ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Solar Outdoor Air-Purifier Using Air Quality Monitoring System** is a bonafide work carried out by


<b>GANESH P K</b>	<b>1KG18EC040</b>
<b>SANTOSH R</b>	<b>1KG18EC049</b>
<b>SRIMANNARAYANA N K</b>	<b>1KG18EC055</b>
<b>SRIRAMSRINIVASAN N K</b>	<b>1KG18EC056</b>

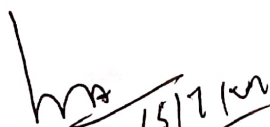
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**Internal Guide**

**Head of the Department**

**Principal**


  
**Mr. Manu D K**  
Associate Professor  
Dept. of ECE


  
**Dr. Girish V Attimarad**  
Professor and Head  
Dept. of ECE

  
**Dr. K. Rama Narasimha**  
Principal, KSSEM  
Principal/Director  
K S School of Engineering and Management  
Bangalore - 560 109

**Examiners**

**Professor & Head**  
**Dept. of Electronics & Communication Engineering**  
**K. S. School of Engineering & Management**  
**Bangalore-560 109**

  
**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

  
**Dr. Kasthik P**  
Name and Signature of Examiner-2



# Home Security System using GSM

Project Work submitted to



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for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

Siddanth Sand	1KG18EC052
Sinchana K P	1KG18EC053
Varsha H	1KG18EC060
Vignesh B	1KG18EC063

Under the Guidance of

**Girish V Attimarad**  
**Professor & Head**  
**K S School of Engineering and Management**



**KSSEM**  
K.S. School of Engineering and Management

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Home Security System using GSM** is a bonafide work carried out by

<b>Siddanth Sand</b>	<b>1KG18EC052</b>
<b>Sinchana K P</b>	<b>1KG18EC053</b>
<b>Varsha H</b>	<b>1KG18EC060</b>
<b>Vignesh B</b>	<b>1KG18EC063</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Head of the Department**

**Principal**

*hm*  
*22/7/22*

*hm*  
*22/7/22*

*K. Rama Narasimha*

**Girish V Attimarad**  
Professor & Head  
Dept. of ECE

**Girish V Attimarad**  
Professor & Head  
Dept. of ECE

**Dr. K. Rama Narasimha**

**KSSEM**  
**Dr. K. RAMA NARASIMHA**  
Principal/Director

**K S School of Engineering and Management**  
Bangaluru - 560 109

**Examiners**

Professor & Head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

*hm*  
*22/7/22*

*AP*  
*22/7/22*

**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

**Dr. Karthik P**  
Name and Signature of Examiner-2





# Detection of Fake Accounts in Twitter using Machine Learning Techniques

Project Work submitted to



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in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>Chandana K M</b>	<b>1KG18EC009</b>
<b>Veluru Harish</b>	<b>1KG18EC061</b>
<b>Venkatesh N</b>	<b>1KG18EC062</b>
<b>Y Dhanush</b>	<b>1KG18EC066</b>

Under the Guidance of

**Dr. Kishore M**  
**Asst. professor**  
**K S School of Engineering and Management**



**KSSEM**  
K.S. School of Engineering and Management

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
**2021-2022**





**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Detection of Fake Accounts in Twitter using Machine Learning Techniques** is a bonafide work carried out by

<b>Chandana K M</b>	<b>1KG18EC009</b>
<b>Veluru Harish</b>	<b>1KG18EC061</b>
<b>Venkatesh N</b>	<b>1KG18EC062</b>
<b>Y Dhanush</b>	<b>1KG18EC066</b>

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**Internal Guide**

**Dr. Kishore M**  
Asst.professor  
Dept. of ECE

**Head of the Department**

**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE

**Principal**

**Dr. K. Rama Narasimha**  
KSSEM

**Examiners**

**Professor & Head**  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

**Dr. K. RAMA NARASIMHA**  
Principal/Director  
K.S. School of Engineering and Management  
Bengaluru - 560 109

**Dr. Girish V Attimarad**  
Name and Signature of Examiner-1

**Dr. Karthik P**  
Name and Signature of Examiner-2

# IMPLEMENTATION OF BRAIN CONTROLLED MINIATURE WHEELCHAIR

Project Work submitted to



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for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>BASINENI KAVERI</b>	<b>1KG18EC007</b>
<b>G GAYATHRI</b>	<b>1KG18EC015</b>
<b>KUCHE DHANUSH</b>	<b>1KG18EC030</b>
<b>MARU ASWINI</b>	<b>1KG18EC032</b>

Under the Guidance of

**Dr. Karthik P**  
**Professor**  
**Department of ECE**  
**K S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022







**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Implementation of Brain Controlled Miniature Wheelchair** is a bonafide work carried out by

<b>BASINENI KAVERI</b>	<b>1KG18EC007</b>
<b>G GAYATHRI</b>	<b>1KG18EC015</b>
<b>KUCHE DIANUSHI</b>	<b>1KG18EC030</b>
<b>MARU ASWINI</b>	<b>1KG18EC032</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of Visvesvaraya Technological University, Belagavi, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

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Professor,  
Dept. of ECE

**Head of the Department**

**Dr. Girish V Attimarad**  
Professor & Head,  
Dept. of ECE

**Principal**

**Dr. K. Rama Narasimha**  
Principal  
KSEEM Director

K S School of Engineering and Management  
Bangalore - 560 109

Dept. of Electronics & Communication Engineering,  
K. S. School of Engineering & Management  
Bangalore-560 109

**Examiners**

Name and Signature of Examiner-1

Name and Signature of Examiner-2



# **A Secure IoT Based Health Monitoring System with Mechanical Ventilator**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>DEEKSHA S</b>	<b>1KG18EC011</b>
<b>HARSHITHA M</b>	<b>1KG18EC019</b>
<b>KAVYASHREE K</b>	<b>1KG18EC028</b>
<b>PRIYANKA NAG G V</b>	<b>1KG18EC043</b>

Under the Guidance of  
**Mr. Gopalakrishna Murthy C R**  
Asst. Professor, ECE  
**K S School of Engineering and Management**



Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022



**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**



**CERTIFICATE**

This is to certify that the project work entitled **A Secure IoT Based Health Monitoring System with Mechanical Ventilator** is a bonafide work carried out by

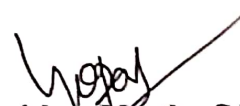
<b>DEEKSHA S</b>	<b>1KG18EC011</b>
<b>HARSHITHA M</b>	<b>1KG18EC019</b>
<b>KAVYASHREE K</b>	<b>1KG18EC028</b>
<b>PRIYANKA NAG G V</b>	<b>1KG18EC043</b>


in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.


**Internal Guide**

**Head of the  
Department**


**Principal/Director**

  
**Mr. Gopalakrishna Murthy C R**  
Asst. Professor  
Dept. of ECE

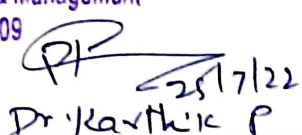
  
**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE  
Professor & Head

  
**Dr. K. Rama Narasimha**  
Principal/Director  
Principal Director  
KSSEM  
K S School of Engineering and Management

**Examiners**

  
**Dr. L. Prithvi Babu**  
Name and Signature of Examiner-1

Dept. of Electronics & Communication Engineering Bengaluru - 560 109  
K. S. School of Engineering & Management  
Bangalore-560 109

  
**Dr. Karthik P**  
Name and Signature of Examiner-2

**SOLDIER HEALTH MONITORING AND TRACKING  
SYSTEM USING LoRa WAN**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>ABHISHEK M</b>	<b>1KG18EC001</b>
<b>ANU A</b>	<b>1KG18EC006</b>
<b>NAVEEN R</b>	<b>1KG18EC036</b>
<b>NIKITHA C M</b>	<b>1KG18EC037</b>

Under the Guidance of

**Mr. Puneeth S**

**Asst. Professor, ECE**

**K S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
**2021-2022**







**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Soldier Health Monitoring and Tracking System Using LoRa Wan** is a bonafide work carried out by

<b>ABHISHEK M</b>	<b>1KG18EC001</b>
<b>ANU A</b>	<b>1KG18EC006</b>
<b>NAVEEN R</b>	<b>1KG18EC036</b>
<b>NIKITHA C M</b>	<b>1KG18EC037</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

*[Signature]*  
**Internal Guide**  
11/7/22

**Mr. Puneeth S**  
Asst. Professor  
Dept. of ECE

**Examiners**

*[Signature]*  
*[Signature]*

Name and Signature of Examiner-1

**Head of the Department**

*[Signature]*  
11/7/22

**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE  
**Professor & Head**  
**Dept. of Electronics & Communication Engineering**  
**K. S. School of Engineering & Management**  
Bangalore-560 109

**Principal/Director**

*[Signature]*  
11/7/22

**Dr. K. Rama Narasimha**  
**Dr. K. RAMANARASIMHA**  
Principal/Director  
**K S School of Engineering and Management**  
Bangalore - 560 109

*[Signature]*  
11/7/22  
*[Signature]*

Name and Signature of Examiner-2





# OBSTACLE DETECTION AND PATH STRATAGEM IN AUTONOMOUS VEHICLE

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>HRITHIK V</b>	<b>1KG18EC021</b>
<b>KAVANA H</b>	<b>1KG18EC026</b>
<b>KAVYA S</b>	<b>1KG18EC027</b>
<b>KISHORE KUMAR S</b>	<b>1KG18EC029</b>

Under the Guidance of

**Dr. K SENTHIL BABU**

**Professor**

**K S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **OBSTACLE DETECTION AND PATH STRATAGEM IN AUTONOMOUS VEHICLE** is a bonafide work carried out by

<b>HRITHIK V</b>	<b>1KG18EC021</b>
<b>KAVANA H</b>	<b>1KG18EC026</b>
<b>KAVYA S</b>	<b>1KG18EC027</b>
<b>KISHORE KUMAR S</b>	<b>1KG18EC029</b>

in partial fulfillment for the award of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to Project Work (18ECP83) prescribed for the degree.

**Internal Guide**

**Dr. K Senthil Babu**  
Professor  
Dept. of ECE

**Head of the Department**

**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE

**Principal**

**Dr. K. Rama Narasimha**  
Dr. K. RAMANASIMHA  
Principal/Director

Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109  
K S School of Engineering and Management  
Bangalore - 560 109

**Examiners**

**Dr. K Senthil Babu**

Name and Signature of Examiner-1

**Dr. Kasthur P**

Name and Signature of Examiner-2



# **Design and Implementation of Image Encryption and Analysis using Dynamic AES**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>Akshay C Kashyap</b>	<b>1KG18EC004</b>
<b>Sadhana H C</b>	<b>1KG18EC046</b>
<b>Sushma R</b>	<b>1KG18EC058</b>
<b>Vishal K</b>	<b>1KG18EC065</b>

Under the Guidance of

**Mr. Sanjay B Nayak**  
**Associate Professor**  
**Department of ECE**  
**K S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022







**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Design and Implementation of Image Encryption and Analysis using Dynamic AES** is a bonafide work carried out by

<b>Akshay C Kashyap</b>	<b>1KG18EC004</b>
<b>Sadhana H C</b>	<b>1KG18EC046</b>
<b>Sushma R</b>	<b>1KG18EC058</b>
<b>Vishal K</b>	<b>1KG18EC065</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Head of the Department**

**Principal**

**Mr. Sanjay B Nayak**  
Associate Professor  
Dept. of ECE

**Dr. Girish V Attimarad**  
Professor & HOD  
Dept. of ECE

**Dr. K. Rama Narasimha**  
KSSEM  
Principal/Director  
K.S. School of Engineering and Management  
Bengaluru - 560 109

**Examiners**

  
Name and Signature of Examiner-1

Professor & Head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

  
Name and Signature of Examiner-2



# OBJECT IDENTIFICATION THROUGH SMART ROBOT USING VOICE COMMAND

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**  
in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>CHANDRASHEKAR N</b>	<b>1KG18EC010</b>
<b>GURUKIRAN K</b>	<b>1KG18EC017</b>
<b>HARISH S</b>	<b>1KG18EC018</b>
<b>HRISHIKESH K M</b>	<b>1KG18EC020</b>

Under the Guidance of

**Dr. KISHORE M**  
Assistant Professor  
**K S School of Engineering and Management**



**KSSEM**  
K. S. School of Engineering and Management

Department of Electronics and Communication Engineering  
K. S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **OBJECT IDENTIFICATION THROUGH SMART ROBOT USING VOICE COMMAND** is a bonafide work carried out by

**CHANDRASHEKAR N      1KG18EC010**  
**GURUKIRAN K        1KG18EC017**  
**HARISH S              1KG18EC018**  
**HRISHIKESH K M    1KG18EC020**

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Dr. Kishore M**  
Asst Professor  
Dept. of ECE

**Head of the Department**

**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE  
**Professor & Head**

Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

**Principal**

**Dr. K. Rama Narasimha**  
KSSEM  
**Dr. K. RAMA NARASIMHA**  
Principal/Director

K S School of Engineering and Management  
Bangaluru - 560 109

**Examiners**

**Dr. K. Sankar Babu**  
Name and Signature of Examiner-1

**Dr. Karthik P**

Name and Signature of Examiner-2



# **SIGN LANGUAGE INTERPRETATION USING MACHINE LEARNING**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>EDULLA BASHA</b>	<b>1KG18EC014</b>
<b>YOGESH K</b>	<b>1KG18EC069</b>
<b>CHANDAN GOWDA S</b>	<b>1KG19EC403</b>
<b>MADHU NARASIMHA</b>	<b>1KG19EC404</b>

Under the Guidance of

**Mrs. Jayashree G R**  
Asst. Professor  
K S School of Engineering and Management



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022







**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Sign Language Interpretation Using Machine Learning** is a bonafide work carried out by


<b>EDULLA BASHA</b>	<b>1KG18EC014</b>
<b>YOGESH K</b>	<b>1KG18EC069</b>
<b>CHANDAN GOWDA S</b>	<b>1KG19EC403</b>
<b>MADHU NARASIMHA</b>	<b>1KG19EC404</b>


in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.

**Internal Guide**

**Head of the Department**


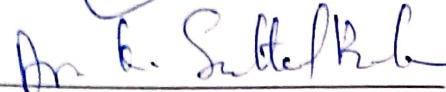
**Principal**

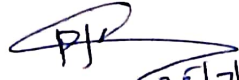
  
**Mrs. Jayashree G R**  
 Asst. Professor  
 Dept. of ECE

  
**Dr. Girish V Attimaraad**  
 Professor & Head  
 Dept. of ECE  
 Professor & Head  
 Dept. of Electronics & Communication Engineering  
 K. S. School of Engineering & Management  
 Bangalore-560 109

  
**Dr. Ramesh Narasimha**  
 KSSEM Director  
 K S School of Engineering and Management  
 Bengaluru - 560 109

**Examiners**

  
  
 Name and Signature of Examiner-1

  
 25/7/22  
**Dr. Keethi K P**  
 Name and Signature of Examiner-2



# **Implementation of Smart Door System for Monitoring Body Temperature and Face Mask Detection**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>SREERAKSHA G S</b>	<b>1KG18EC054</b>
<b>VINISHA R P</b>	<b>1KG18EC064</b>
<b>YASHASWINI G</b>	<b>1KG18EC067</b>
<b>YASHASWINI G M</b>	<b>1KG18EC068</b>

Under the Guidance of

**Mrs. Renuka V Tali**

**Asst. Professor, ECE**

**K S School of Engineering and Management**



**KSSEM**  
K S School of Engineering and Management

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
**2021-2022**





**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

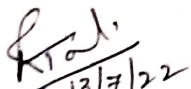
**CERTIFICATE**

This is to certify that the project work entitled **Implementation of Smart Door System for Monitoring Body Temperature and Face Mask Detection** is a bonafide work carried out by

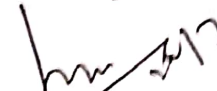
<b>SREERAKSHA G S</b>	<b>1KG18EC054</b>
<b>VINISHA R P</b>	<b>1KG18EC064</b>
<b>YASHASWINI G</b>	<b>1KG18EC067</b>
<b>YASHASWINI G M</b>	<b>1KG18EC068</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (18ECP83)** prescribed for the degree.


**Internal Guide**

  
13/7/22  
**Mrs. Renuka V Tali**  
Asst. Professor  
Dept. of ECE


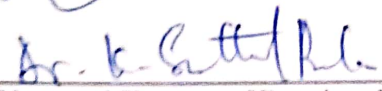
**Head of the Department**

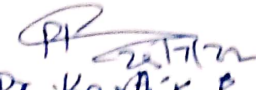
  
**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE

**Principal/Director**

  
**Dr. K. Rama Narasimha**  
KSSEM  
**Dr. K. RAMA NARASIMHA**  
Principal/Director  
K S School of Engineering and Management  
Bangalore - 560 109

**Examiners**

  
  
Name and Signature of Examiner-1

  
**Dr. Karthik P**  
Name and Signature of Examiner-2

# **"IoT-based Approach for Fully Automated Greenhouse System"**

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

Doma Devisree	1KG18EC013
J Akila	1KG18EC022
Niraj Nishant	1KG18EC038
Asmat Bashir	1KG19EC402

Under the Guidance of

**Mr. Gopalakrishna Murthy C R**  
Assistant Professor, Dept. of ECE  
K S School of Engineering and Management



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022







**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

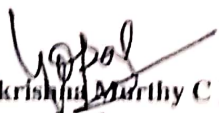
**CERTIFICATE**

This is to certify that the project work entitled "IoT-based Approach for Fully Automated Greenhouse System" is a bonafide work carried out by

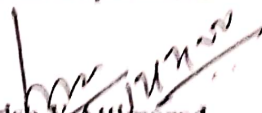
Doma Devisree	1KG18EC013
J Akila	1KG18EC022
Niraj Nishant	1KG18EC038
Asmat Bashir	1KG19EC402

in partial fulfillment for the award of Bachelor of Engineering in Electronics & Communication Engineering of Visvesvaraya Technological University, Belagavi, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to Project Work (18ECP83) prescribed for the degree.


**Internal Guide**

  
**Mr. Gopalakrishna Murthy C R**  
Assistant Professor  
Dept. of ECE

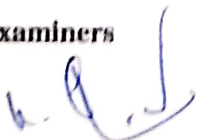

**Head of the Department**

  
**Dr. Girish V. Attimarad**  
Professor & Head  
Dept. of ECE  
Professor & Head

**Principal**


  
**Dr. K. Rama Narasimha**  
Principal/Director  
KSSEM

**Examiners**

  
  
Name and Signature of Examiner-1

Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

**Dr. K. RAMA NARASIMHA**  
Principal/Director  
K S School of Engineering and Management  
Bengaluru - 560 109

  
**Dr. Karthik P**  
Name and Signature of Examiner-2



# Implementation of Warfield Surveillance Robot Using Night Vision Wireless Camera

Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

**MOHAMMED ANAS      1KG16EC057**

**TAURAYS FATIMA      1KG16EC107**

Under the Guidance of

**Mrs. Shilpa A P**  
Assistant Professor,  
Dept. of ECE  
**K S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Implementation of Warfield Surveillance Robot Using Night Vision Wireless Camera** is a bonafide work carried out by

**MOHAMMED ANAS 1KG16EC057**

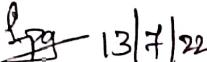
**TAURAYS FATIMA 1KG16EC107**

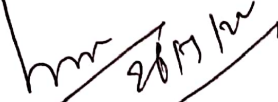
in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (15ECP85)** prescribed for the degree.


**Internal Guide**

**Head of the Department**



**Principal**


  
13/7/22  
**Mrs. Shilpa A P**  
Assistant professor  
Dept. of ECE

  
**Dr. Girish V Attinarad**  
Professor and Head  
Dept. of ECE  
Professor & head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

  
**Dr. K. Rama Narasimha**  
**Dr. K. RAMA NARASIMHA**  
Principal/Director  
K S School of Engineering and Management  
Bengaluru - 560 109

**Examiners**

  
  
Name and Signature of Examiner-1

  
Name and Signature of Examiner-2



# CLOUD BASED CAR PARKING SYSTEM

Project Work Submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfilments of the requirements  
for the award of the degree of

## **BACHELOR OF ENGINEERING IN ELECTRONICS AND COMMUNICATION ENGINEERING**

Submitted by

<b>Skanda S</b>	<b>1KG16EC093</b>
<b>Bharath A</b>	<b>1KG17EC013</b>
<b>Keerthi Mallesh</b>	<b>1KG17EC034</b>
<b>Nandini K</b>	<b>1KG17EC052</b>

Under the Guidance of

**Mr. Manu D K**

**Associate Professor**

**K.S School of Engineering and Management**



**KSSEM**

Department of Electronics and Communication Engineering

K.S School of Engineering and Management

No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109

2021-2022





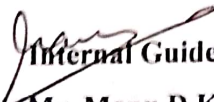


**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION  
ENGINEERING  
CERTIFICATE**

This is to certify that the phase 2 project work entitled "Cloud Based Car Parking System" is a bonafide work carried out by,

Skanda S	1KG16EC093
Bharath A	1KG17EC013
Keerthi Mallesh	1KG17EC034
Nandini K	1KG17EC052

in partial fulfillment for the award of Bachelor of Engineering in Electronics and Communication Engineering of Visvesvaraya Technological University, Belagavi, during the years 2021-2022. It is certified that all the suggestions indicated during the presentations and discussion have been incorporated in the report and this report satisfies the academic requirement with respect to Project Work Phase-2 (17ECP85) prescribed for the degree.

  
Internal Guide  
Mr. Manu D K

Associate Professor  
Dept. of ECE

  
Head of the Department

Dr. Girish V Attimarad

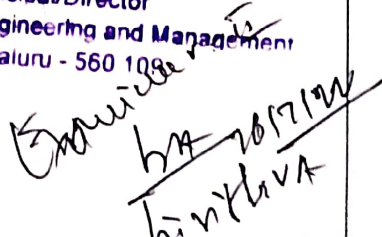
Professor & Head,

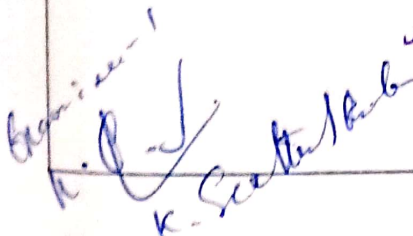
Dept. of ECE K S School of Engineering and Management  
Professor & Head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

  
Principal

Dr. K. Rama Narasimha

Dr. K. RAMANARASIMHA  
Principal/Director  
K.S. School of Engineering and Management  
Bangalore - 560 109

  
Principal/Director  
K.S. School of Engineering and Management  
Bangalore - 560 109

  
Mr. Manu D K  
Internal Guide  
K. S. School of Engineering & Management  
Bangalore-560 109



**Design Of IoT Based Landmine Detection Robot**  
Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

in partial fulfillment of the requirements  
for the award of degree of

**BACHELOR OF ENGINEERING**  
in  
**ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted by

<b>Anarghya BG</b>	<b>1KG17EC008</b>
<b>Bhargavi KV</b>	<b>1KG17EC014</b>
<b>Mrunalini Girish Antin</b>	<b>1KG17EC049</b>
<b>Karthikeyan T J</b>	<b>1KG17EC032</b>

Under the Guidance of

**Mrs. Swati Sarkar**  
Assistant Professor  
Department Of Electronics and Communication  
K S School of Engineering and Management



**KSSEM**  
K.S. SCHOOL OF ENGINEERING AND MANAGEMENT

Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**KSSEM**

**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **Design of IOT Based Landmine Detection Robot** is a bonafide work carried out by

<b>Anarghya BG</b>	<b>1KG17EC008</b>
<b>Bhargavi KV</b>	<b>1KG17EC014</b>
<b>Mrunalini Girish Antin</b>	<b>1KG17EC049</b>
<b>Karthikeyan T J</b>	<b>1KG17EC032</b>

in partial fulfillment for the award of **Bachelor of Engineering in Electronics & Communication Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Project Work (17ECP85)** prescribed for the degree.

**Internal Guide**

*Swati Sarkar*  
09/07/22

**Mrs. Swati Sarkar**  
Assistant Professor  
Dept. of ECE

**Head of the Department**

*[Signature]*  
09/07/22

**Dr. Girish V Attimarad**  
Professor & Head  
Dept. of ECE

**Principal**

*[Signature]*  
09/07/22

**Dr. K. Rama Narasimha**  
KSSEM

**Dr. K. RAMA NARASIMHA**  
Principal/Director

**Dept. of Electronics & Communication Engineering, K.S. School of Engineering and Management  
K. S. School of Engineering & Management  
Bangalore-560 109**

**Examiners**

*[Signature]*  
Name and Signature of Examiner-1

*[Signature]*  
Name and Signature of Examiner-2



# **IoT Based Food Monitoring System Using Low-Cost Sensors**

A Project Work submitted to



**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**  
in partial fulfillment of the requirements  
for the award of degree of

**Bachelor of Engineering**  
in  
**Electronics & Communication Engineering**

Submitted by

<b>Jayanth Hegde H R</b>	<b>1KG17EC098</b>
<b>Kavitha B R</b>	<b>1KG17EC099</b>
<b>Shreyas R</b>	<b>1KG17EC075</b>
<b>Harsha</b>	<b>1KG16EC029</b>

Under the Guidance of  
**Mrs. Bhargavi Vijendra Sangam**  
Assistant. Professor,  
Department of ECE  
KSSEM, Bengaluru.



Department of Electronics and Communication Engineering  
K.S. School of Engineering and Management  
No. 15, Mallasandra, off Kanakapura Road, Bengaluru-560109  
2021-2022





**K.S. SCHOOL OF ENGINEERING AND MANAGEMENT  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**CERTIFICATE**

This is to certify that the project work entitled **IoT Based Food Monitoring System Using Low-cost Sensors** is a bonafide work carried out by


Jayanth Hegde	1KG17EC098
Kavitha B R	1KG17EC099
Shreyas R	1KG17EC075
Harsha	1KG16EC029

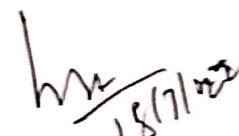
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**Internal Guide**

**Head of the Department**

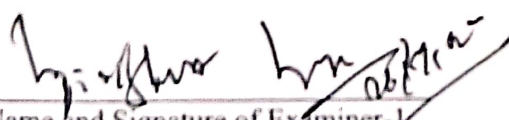
**Principal**

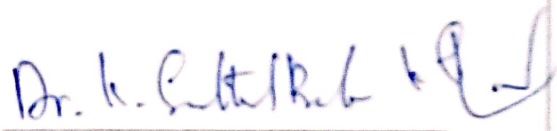
  
**Mrs. Bhargavi Vijendra Sangam**  
Assistant Prof  
Dept. of ECE

  
**Dr. Girish v Attimarad**  
Prof & Head  
Dept. of ECE  
Professor & head  
Dept. of Electronics & Communication Engineering  
K. S. School of Engineering & Management  
Bangalore-560 109

  
**Dr. K. Rama Narasimha**  
DKSSEEMA NARASIMHA  
Principal/Director  
K S School of Engineering and Management  
Bangaluru - 560 109

**Examiners**

  
Name and Signature of Examiner-1

  
Name and Signature of Examiner-2