

SOLAR POWERED INDOOR AIR PURIFIER

Project Work submitted to



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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

BACHELOR OF ENGINEERING
in
ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

DHANUSH R	1KG18EE002
DIVYA M	1KG18EE004
KEERTHANA M	1KG18EE007

Under the Guidance of

Dr Arun Kumar M
Associate & Head
Dept of Electrical & Electronics
K S School of Engineering and Management



KSSEM
K.S. SCHOOL OF ENGINEERING AND MANAGEMENT

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



KSSEM
K.S. Group of Institutions

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

CERTIFICATE

This is to certify that the project work entitled **Solar Powered Indoor Air Purifier** is a bonafide work carried out by

DHANUSH R 1KG18EE002

DIVYA M 1KG18EE004

KEERTHANA M 1KG18EE007

in partial fulfillment for the award of **Bachelor of Engineering in Electrical and Electronics 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 (18EEP83)** prescribed for the degree.

Internal Guide

Dr Arun Kumar M
Associate & Head
Dept. of EEE

Head of the Department

Dr Arun Kumar M
Associate & Head
Dept. of EEE

Principal

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

K S School of Engineering and Management
Bengaluru - 560 109

Examiners

25/7/22
Name and Signature of Examiner-1

25/7/2022
Name and Signature of Examiner-2



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

DECLARATION

We

DIANUSH R	1KG18EE002
DIVYA M	1KG18EE004
KEERTHANA M	1KG18EE007

the students of BE VIII Semester (Electrical and Electronics Engineering) declare that the project entitled "Solar Powered Indoor Air Purifier" is carried out by us as a partial fulfillment of academic requirement of degree under Visvesvaraya Technological University. The content in the report are original and are free from plagiarism and other academic dishonesty and are not submitted to any other University either partially or wholly for the award of any other degree.

NAME	USN	Signature
DIANUSH R	1KG18EE002	<i>Dianush R</i>
DIVYA M	1KG18EE004	<i>Divya M</i>
KEERTHANA M	1KG18EE007	<i>Keerthana M</i>

Date: 21/07/2022
Place: Bengaluru

Design and Development of Power Generation Model using Power Humps

Project Work submitted to



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

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

BACHELOR OF ENGINEERING in ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

Nikitha P	1KG18EE009
Sai Darshan G	1KG18EE011
Varshini K	1KG18EE013

**Under the Guidance of
Mrs. Manjula B G
Associate Professor
Electrical and Electronics Engineering
K S School of Engineering and Management**



Department of Electrical and Electronics Engineering
K.S. School of Engineering and Management
#15, Mallasandra, off Kanakapura Road, Bengaluru-560109
2021-2022



KSSEM

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

CERTIFICATE

This is to certify that the project work entitled **Design and Development of Power Generation Model using Power Humps** is a bonafide work carried out by

Nikitha P	1KG18EE009
Sai Darshan G	1KG18EE011
Varshini K	1KG18EE013

in partial fulfillment for the award of **Bachelor of Engineering in Electrical and Electronics 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 (18EEP83)** prescribed for the degree.

Guide	Head of the Department	Principal/Director
Mrs. Manjula B G Associate Professor Dept. of EEE	Dr. Arun Kumar. M Associate Professor & Head of the Department Dept. of EEE	Dr. K. Rama Narasimha KSSEM

Examiners

Associate Professor
Head of the Department
Department of Electrical & Electronics Engineering
K.S. School of Engineering and Management
Bengaluru-560 109

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

Name and Signature of Examiner-1

Name and Signature of Examiner-2



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

DECLARATION

We

Nikitha P	1KG18EE009
Sai Darshan G	1KG18EE011
Varshini K	IKG18EE013

the students of **BE VIII Semester (Electrical and Electronics Engineering)** declare that the project entitled “**Design and Development of Power Generation Model using Power Humps**” is carried out by us as a partial fulfillment of academic requirement of degree under **Visvesvaraya Technological University**. The content in the report are original and are free from plagiarism and other academic dishonesty and are not submitted to any other University either partially or wholly for the award of any other degree.

NAME	USN	Signature
Nikitha P	1KG18EE009	<i>Nikitha P</i>
Sai Darshan G	1KG18EE011	<i>Sai Darshan G</i>
Varshini K	IKG18EE013	<i>Varshini K</i>

Date: 30-06-2022
Place: Bengaluru

DESIGN AND DEVELOPMENT OF IOT SURVEILLANCE SYSTEM

Project Work submitted to



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

JAYAWANTH B

1KG18EE005

SUSHMA UDUPA K S

1KG18EE012

Under the Guidance of

Mrs. Hemapriya M

Assistant Professor

Department of EEE

K S School of Engineering and Management



KSSEM
K S School of Engineering and Management

Department of Electrical and Electronics 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
ELECTRICAL AND ELECTRONICS ENGINEERING




CERTIFICATE

This is to certify that the project work entitled **DESIGN AND DEVELOPMENT OF IOT SURVEILLANCE SYSTEM** is a bonafide work carried out by

1KG18EE005
1KG18EE012

JAYAWANTH B
SUSHMA UDUPA K S

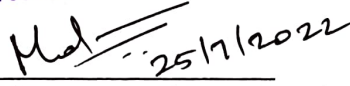
in partial fulfillment for the award of **Bachelor of Engineering in Electrical and Electronics Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-2022. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement with respect to **Final year Project (18EEP83)** prescribed for the degree.

Internal Guide	Head of the Department	Principal
		
Mrs. Hemapriya M Assistant professor Dept. of EEE	Dr. Arun Kumar M Head of the Department Dept. of EEE	Dr. K. Rama Narasimha KSSEM

Associate Professor
Head of the Department
Department of Electrical & Electronics Engineering
KS School of Engineering and Management
Bengaluru-560 109

Principal/Director
KSSEM
KS School of Engineering and Management
Bengaluru - 560 109


Name and Signature of Examiner-1


Name and Signature of Examiner-2



K.S. SCHOOL OF ENGINEERING AND MANAGEMENT DEPARTMENT OF ELECTRICAL
AND ELECTRONICS ENGINEERING

DECLARATION

We,

JAYAWANTH B 1KG18EE005
SUSHMA UDUPA K S 1KG18EE012

the students of **BE VIII Semester (Electrical and Electronics Engineering)** declare that the project entitled **DESIGN AND DEVELOPMENT OF IOT SURVEILLANCE SYSTEM** is carried out by us as a partial fulfillment of academic requirement of degree under **Visvesvaraya Technological University**. The content in the report are original and are free from plagiarism and other academic dishonesty and are not submitted to any other University either partially or wholly for the award of any other degree.

NAME	USN	Signature
JAYAWANTH B	1KG18EE005	
SUSHMA UDUPA K S	1KG18EE012	

Date: 30-06-2022
Place : Bengaluru

DESIGN AND DEVELOPMENT OF SUBSTATION MONITORING AND CONTROL SYSTEM USING IoT

Project Work submitted to



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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

BACHELOR OF ENGINEERING
in
ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

ARJUN A 1KG17EE002

DHEENA P 1KG18EE003

SAGAR K 1KG18EE010

Under the Guidance of

Mrs. Manjula B G

Associate Professor

Electrical and Electronics Engineering

K S School of Engineering and Management



Department of Electrical and Electronics 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 ELECTRICAL AND ELECTRONICS
ENGINEERING**

CERTIFICATE

This is to certify that the project work entitled **DESIGN AND DEVELOPMENT OF SUBSTATION MONITORING AND CONTROL SYSTEM USING IoT** is a bonafide work carried out by

ARJUN A **1KG17EE002**
DHEENA P **1KG18EE003**
SAGAR K **1KG18EE010**

in partial fulfillment for the award of **Bachelor of Engineering in Electrical and Electronics 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 **Final year Project (18EEP83)** prescribed for the degree.

Guide	Head of the Department	Principal / Director
Mrs. Manjula B G Associate Professor Department of EEE	Dr. Arun Kumar M Associate Professor & Head of the Department Department of EEE Associate Professor Head of the Department	Dr. K. RAMA NARASIMHA Principal/Director Dr. K. Rama Narasimha K S School of Engineering and Management KSSEM Bengaluru - 560 109

Examiners

Name and Signature of Examiner-1
25/7/22

Department of Electrical & Electronics Engineering
K S School of Engineering and Management
Bengaluru-560 109

Name and Signature of Examiner-2
25/7/2022



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

DECLARATION

We

ARJUN A	1KG17EE002
DHEENA P	1KG18EE003
SAGAR K	1KG18EE010

the students of **BE VIII Semester (Electrical and Electronics Engineering)** declare that the project entitled **DESIGN AND DEVELOPMENT OF SUBSTATION MONITORING AND CONTROL SYSTEM USING IoT** is carried out by us as a partial fulfillment of academic requirement of degree under **Visvesvaraya Technological University**. The content in the report is original and are free from plagiarism and other academic dishonesty and are not submitted to any other University either partially or wholly for the award of any other degree.

NAME	USN	Signature
ARJUN A	1KG17EE002	
DHEENA P	1KG18EE003	
SAGAR K	1KG18EE010	

Date: 30/6/2022
Place: Bengaluru

Project Proposal Reference Number: 45S_BE_3323
DESIGN AND DEVELOPMENT OF COST-EFFECTIVE 3D PRINTER

A Project sponsored by



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
INDIAN INSTITUTE OF SCIENCE CAMPUS
BENGALURU -560012

In partial fulfilment

Submitted by

SARVESH M **1KG16EE025**

ANILKUMAR S **1KG17EE001**

Under the Guidance of

Mrs. TEJASWINI G V
Assistant Professor
Dept. of Electrical and Electronics Engineering
KSSEM, Bengaluru



KSSEM
KARNATAKA STATE SCHOOL OF ENGINEERING AND MANAGEMENT

Department of Electrical and Electronics 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 ELECTRICAL AND ELECTRONICS
ENGINEERING**

CERTIFICATE

This is to certify that the project work entitled **DESIGN AND DEVELOPMENT OF COST-EFFECTIVE 3D PRINTER** is a bona fide work carried out by


SARVESH M 1KG16EE025
ANILKUMAR S 1KG17EE001


in partial fulfillment for the award of **Bachelor of Engineering in Electrical and Electronics 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 **Final year Project (17EEP85)** prescribed for the degree.

Guide

Head of the Department

Principal / Director

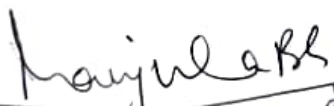

Mrs. Tejaswini G V
Assistant Professor
Department of EEE


Dr. Arun Kumar M
Associate Professor &
Head of the Department
Department of EEE
Associate Professor
Head of the Department


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

Examiners

Department of Electrical & Electronics Engineering, K S School of Engineering and Management, Bengaluru-560 109


Name and Signature of Examiner-1


Name and Signature of Examiner-2




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

DECLARATION

We

SARVESH M 1KG16EE025
ANILKUMAR S 1KG17EE001

the students of **BE VIII Semester (Electrical and Electronics Engineering)** declare that the project entitled **DESIGN AND DEVELOPMENT OF COST-EFFECTIVE 3D PRINTER** is carried out by us as a partial fulfillment of academic requirement of degree under **Visvesvaraya Technological University**. The content in the report are original and are free from plagiarism and other academic dishonesty and are not submitted to any other University either partially or wholly for the award of any other degree.

NAME	USN	Signature
SARVESH M	1KG16EE025	
ANILKUMAR S	1KG17EE001	S. Anilkumar

Date: 30/6/2022
Place: Bengaluru

HYDROPOWER GENERATION USING MICROTURBINE IN THE PLUMBING SYSTEM OF THE BUILDING

Project Work submitted to



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

in partial fulfilment of the requirements
for the award of a degree of

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING

Submitted by

DEEPAK A S 1KG16EE010

KIRAN KUMAR G 1KG16EE015

Under the Guidance of

Mrs Tejaswini G V

Assistant Professor

Dept. Of E&E Engineering

K. S. School of Engineering and Management



KSSEM
K.S. SCHOOL OF ENGINEERING AND MANAGEMENT

Department of Electrical and Electronics 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 ELECTRICAL AND ELECTRONICS
ENGINEERING**

CERTIFICATE

This is to certify that the project work entitled **HYDROPOWER GENERATION USING
MICROTURBINE IN THE PLUMBING SYSTEM OF THE BUILDING** is a bonafide
work carried out by

DEEPAK A S 1KG16EE010
KIRAN KUMAR G 1KG16EE015

in partial fulfilment for the award of **Bachelor of Engineering in Electrical and Electronics
Engineering** of **Visvesvaraya Technological University, Belagavi**, during the year 2021-
2022. It is certified that all the suggestions indicated during the internal assessment have been
incorporated in the report and this report satisfies the academic requirement with respect to
Project Work (15EEP85) prescribed for the degree.


Internal Guide

Head of the Department


Principal



Mrs. Tejaswini G V
Assistant professor
Dept. of EEE


Dr. Arun Kumar M
Associate professor & Head
Dept. of EEE
Associate Professor
Head of the Department
Department of Electrical & Electronics Engineering
K.S. School of Engineering and Management
Bengaluru-560 109


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

Examiners


25/07/2022
Name and Signature of Examiner-1


25/07/2022
Name and Signature of Examiner-2



KSSEM

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

DECLARATION

We,


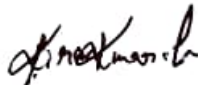
DEEPAK A S

1KG16EE010

KIRAN KUMAR G

1KG16EE015

the students of **BE VIII Semester (Electrical and Electronics Engineering)** declare that the project entitled "**Hydropower generation using microturbine in the plumbing system of the building**" is carried out by us as partial fulfillment of academic requirement of degree under **Visvesvaraya Technological University**. The content in the report is original and are free from plagiarism and other academic dishonesty and are not submitted to any other University either partially or wholly for the award of any other degree.

NAME	USN	Signature
DEEPAK A S	1KG16EE010	
KIRAN KUMAR G	1KG16EE015	

Date: 30/6/2022
Place: Bengaluru