

Bannari Amman Institute of Technology
Sathyamangalam 638 401



Final Year Students
Project Logbook

Academic Year 2021-2022

Department of Information Technology

Student's Project Log Book

B.E. / B.Tech. Degree Examinations

Subject Code & Title: 18IT804 Project Work - II

Student Name : BAVADHARANI MP

Register Number : 182IT119

**Project Title : TRAFFIC SIGN CLASSIFICATION USING
DEEP LEARNING**

Project Guide : Mr.ARUN KUMAR R

Project Coordinator : Ms. PONNILA P

Project Assessors :

Final Year Project Work Plan

	Weekly Activities									
	1-2	3	4	5-7	8	9-11	12	13	14-15	
Selection of Domain and Project Title (via Literature Surveys) Study the Fundamentals of selected Domain, Aim & Objectives of the project, and an insight view of the project										
Confirmation of Identified Project Domain and Title (First Review) <i>(Project Work Confirmation Form)</i>										
Literature review and Problem Formulation in the identified Project Domain and Discussion the same with the supervisor										
Idea / Algorithm / Hardware Architecture / Implementation strategy analysis Theoretical & Mathematical analysis Proposed Algorithm / Architecture in Hardware or Software - (step by step)										
Prepare and present the proposed project work via PPT (Second Review)										
Incorporate / Modify the project work based on suggestions given by the project assessors along with supervisor. Compare the proposed method / idea / Architecture with existing system by its performance metrics										
Prepare and present the completed project work via PPT (Third Review)										
Prepare an intensive “Project Report” along with “Plagiarism Report”										
Project Execution / Demo and submit the <i>Project Submission Form</i> to Project Coordinator										

Note:

- ✓ No change in project title/objectives prescribed shall be made without the approval of the Project guide, Project review committee and HoD.
- ✓ The students have to adhere to the above schedule.
- ✓ The students are instructed to get initials from the irrespective guides in project progress logbook and submit the same during the project review committee
- ✓ Attendance and progress will be monitored seriously.

Review Details:

Review Date (at BIT)	Score (Based on Evaluation Rubrics) By Faculty Guide	Review Date (at Industry)	Score (Based on Evaluation Rubrics) By Industry Guide

Project Work Confirmation Form

Project Title: <i>(Title should be specific and concise)</i>	TRAFFIC SIGN CLASSIFICATION USING DEEP LEARNING			
Team Members & Department: <i>(Maximum 3 only)</i>	Register No(s).	Name of the Project Member(s) With Mobile No. & E-mail id		
	182IT103	AISHVARYA R 9629666018 aishvarya.it18@bitsathy.ac.in		
	182IT119	BAVADHARANI M P 8778662504 Bavadharani.it18@bitsathy.ac.in		
Aim of this Project Work:	<ul style="list-style-type: none"> • The ultimate aim of the project is to alert the driver by the automatically recognizing the traffic signs which is present along the road using deep learning. • As per available literature, very little body of research is attempted to detect the traffic sign automatically. 			
Objectives of this Project Work: <i>(Approved by the project committee, not exceeding five)</i>	<ol style="list-style-type: none"> 1. The objective of this project is to detect the traffic sign and help the driver to drive carefully and also to avoid accidents. 2. In order to prevent accidents. 3. Also it ensures safety for both drivers and pedestrians to drive carefully 			
Expected Outcome(s): <i>(Tick the appropriate option)</i>	Paper Publication		✓	Product
Project Supervisor(s): <i>(As officially Assigned)</i>	Name :	Mr. ARUN KUMAR R		
	Designation :	ASSISTANT PROFESSOR		
Supervisor Recommendation:	Accepted / Not Accepted			
	Signature (with date): 			
Project Committee Approval:	<i>Approved</i>		<i>Minor Revision Required</i>	
	<i>Major Revision Required</i>		<i>Disapproved</i>	

Project Coordinator**HoD**

Project Work Confirmation Form Contd.,

Abstract <i>(Maximum of 150Words)</i>	Innovation has changed the manner in which we live. Artificial Intelligence consciousness has emphatically influenced each field furthermore, is making life more straightforward for us. Innovation helped traffic framework is a noteworthy leap forward in the car industry. The car Industry is taking goliath jumps with the progression of independent vehicles. Independent vehicles address a certitude for the not-so-distant future and it is normal to be protected and bother-free. Traffic Sign Classification is quite possibly the main undertaking of independent vehicles. Our research intends to do this arrangement productively to stay away from mishaps and to encourage the believability of independent vehicles. If not, this could endanger traffic nature. This exploration prompted the execution of a Traffic Sign (TS) CNN model for traffic sign arrangement. some grouping reports likewise create a sound.	
Starting Date	:	
Ending Date (<i>Tentative</i>)	:	
Type of Project*	: Process / Product / <u>Software</u> / Hardware / Software & Hardware / Others: _____	
Nature of Project*	: Theoretical (Modelling) / Simulation / New Process / New Product / <u>Development from Existing Process or Product</u>	
Nature of Collaboration*	: Industry / In-house / Consultancy / Internship	
Associated with Industry, if any	Contact Person	: A. ARUN JESURAJ
	Designation	: CO-FOUNDER
	Company Address	: No – 6 North Hurur Road, Kanchan Building, Near Anna statue, Coimbatore Tamil Nadu 641018 India
	Contact Numbers	: +914224208739
	E-Mail id	: info@pinnacleseven.com

Approval Letter No. and Date	:			
Outcomes of Literature: Any existing / past initiatives are helps to solve the identified problem? <i>(Maximum of 50 words)</i>	<p>This paper published by C.G.kiran,Lekhesh V. Prabhu; V.abdul Rahiman in the title of Support Vector Machine learning based traffic sign detection.</p> <p>: This paper is about a vision-based vehicle guidance system deals with the detection and recognition of traffic signs. Traffic sign recognition system collects information ahead on the road and helps the driver to make timely decisions, making driving safer and easier</p>			
Proposed Solution of your Project: <i>Outline technical idea proposed in this proposal, highlighting how it differs from any existing solutions</i> <i>(Max. of 150 words)</i>	<p>Solution for the Project:</p> <ul style="list-style-type: none"> • Traffic sign detection is the process of automatically recognizing traffic signs along the road, including speed limit signs, yield signs, merge signs, etc. • If a person is driving near any school zone, hospital zone it intimate the drivers by voice message • If it is a danger zone it will alert the driver by giving alert sound • Being able to automatically recognize traffic signs and to intimate the driver. So, accidents can be avoided. 			
Target beneficiaries: <i>Tick (✓) as many as applicable</i>	Farmers	✓	Artisans	✓
	Laborer	✓	Women	✓
	Children	✓	Youth	✓
	Senior citizens		Physically challenged section	
	Industrial workers	✓	Economically weaker section	
	Others (please specify): _____			

Methodology:

(State the tasks and sub tasks planned in order to achieve aims and objective mentioned previously)

(Not exceeding 250 words
Provide Flowchart)

- Collect the data required for training. Here we have collected the datasets of traffic signs after recognizing some of the traffic signs.
- After collecting the data pre-processing is done, it is nothing but image resizing. Removing the missing or irrelevant information.
- Then the training of data is done in order to predict the output. Here we have trained the data which has been collected after pre-processing technique.
- After training is completed, all the trained data will be stored in a file called pickle file. once this file is created, we can use this file for testing purpose how many times we want and it is also need not to be trained again.
- Then it will predict what kind of traffic sign the input image is and also it will predict the accuracy, that is how much percentage the input image matches to the dataset image and then the accuracy will be calculated.

Part and Assembly Drawing (If applicable)		
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Types of Energy Conversions <i>(If applicable)</i>	:	
Bill of Materials (BoM) and Budget Details	:	Furnish details in the blow mentioned Table.

(*strike whichever is not applicable)

Budget details:

Sl. No.	Component / Item Details	Quantity	Cost (in Rs.)	Justifications
Total , Rs.				

Signature of Project Members

Signature of Project Guide

Project Implementation Details

Week 1

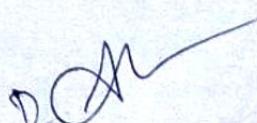
Activity as per work Plan: Selection of Domain and Project Title (via Literature Surveys)

Work carried out (Individual contribution to the project):

- The selected domain is “Deep learning”
- The title of the project is “TRAFFIC SIGN CLASSIFICATION USING DEEP LEARNING”
- Posted my ideas in the form of PPT

Remark(s) by Guide(s):

- To go through more research papers and get a better idea on existing system.
-
-



Signature of Guide

Date:

Project Implementation Details

Week 2

Activity as per work Plan: Study the Basics related to Selected Domain, Aim & Objectives of the project, and an insight view of the project

Work carried out (Individual contribution to the project):

- Read some research papers and get some ideas.
- And find some problems in that and come up with a better solution.

Remark(s) by Guide(s):

- To research more about the software, they are going to use .
-
-

Date:



Signature of Guide



Evaluation Rubrics

Department of Information Technology

Project work - Continuous Assessment for FIRST REVIEW (Max. 100 Marks)

Name of Student : BAVADHARANI M P

Class

: B.TECH INFORMATION TECHNOLOGY

Register No. :182IT119
Project Title :TRAFFIC SIGN CLASSIFICATION
USING DEEP LEARNING

Parameters	Comments			Marks		
	Guide	Assessors	Guide (25)	I	II	Assessors (75) Total (100)
Literature Survey			/5	/20	/20	/20
Aim & Objectives of the Project <i>(Problem statement)</i>			/5	/5	/5	/25
Scope of the Project <i>(Contribution to society, concern for environment)</i>			-	/10	/10	/10
Need for the current study <i>(Compliance to Standards - Clear statement of existing Standards / Norms, with compliance)</i>			-	/10	/10	/10
Feasibility Analysis						
<i>(Identification of essential concepts - Clear list, description and justification of most essential Mathematical, Science, Engineering and Management Concepts included)</i>			/5	/5	/5	/10
Proposed Methodology						
<i>(Proposed and implemented Gantt chart included; with clear distribution of workload among the team</i>			/5	/5	/5	/10



Parameters	Comments	Guide (25)	Marks			Total (100)
			I	II	Avg.	
Oral Presentation <i>(well organized, clear presentation, demo included, all members have equal participation and allocated time well utilized)</i>		/5	/10	/10	/10	/15
Viva-Voce <i>(Technical Knowledge related to the project)</i>		-	/5	/5	/5	/5
Role Charity <i>(Contributes to the team, cooperates in the team, and mentors /leads the team)</i>		-	/5	/5	/5	/5
Total	/25	/75	/15	/15	/100	
Signature						-

Project Implementation Details

Week 4

Activity as per work Plan: **Literature review and Problem formulation in the identified Project and discussion the same with supervisor**

Work carried out (Individual contribution to the project):

- Read about procedures of using the software to get the desired result.
- Installed required dependencies.

Remark(s) by Guide(s):

- collect more datasets and select the best algorithm for the project .
-

Date:



Signature of Guide



Project Implementation Details

Week 5

Activity as per work Plan: Idea / Algorithm / Hardware Architecture / Implementation strategy analysis

Work carried out (Individual contribution to the project):

- Referred to many algorithms and chose a better algorithm for our project.
- Collected the data sets of traffic signs after recognizing the important signs

Remark(s) by Guide(s):

- Asked them to focus more on pre processing and training part.
-
-



Signature of Guide

Date:

Project Implementation Details

Activity as per work Plan: **Theoretical and Mathematical analysis**

Week 6

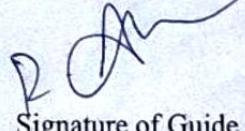
Work carried out (Individual contribution to the project):

- After collecting the dataset preprocessing is done
- Trained the datasets which is been collected and processed

Remark(s) by Guide(s):

- Asked them to test the data and calculate accuracy.
- To learn python.
-

Date:



Signature of Guide



Project Implementation Details

Activity as per work Plan: **Proposed Algorithm / Architecture in Hardware or Software - (step by step)** Week 7

Work carried out (Individual contribution to the project):

- Pickle file generated
- Accuracy will also be calculated

Remark(s) by Guide(s):

- Asked them to test the data with input images.
-
-

Date:



Signature of Guide

**Evaluation Rubrics****Department of Information Technology****Project Work - Continuous Assessment for SECOND REVIEW (Max. 150 Marks)**

Name of Student : BAVADHARANI MP
Class : B.TECH INFORMATION TECHNOLOGY

Register No. : 182IT119 .
Project Title : TRAFFIC SIGN CLASSIFICATION USING
DEEP LEARNING

Parameters	Comments	Assessors	Guide (50)	Marks		
				I	II	Total (150)
Project Work Plan <i>(How the project will be implemented to achieve the Outcome, Including Inputs, Activities, Timeframe, Role Assignment, and Outputs; Gantt Chart included)</i>			/5	/10	/10	/15
Choice of components / modules for system development <i>(Preparing the equipment/ component list- An Exhaustive list of possible Modern Tools/Components that may be used to implement the project is provided, together with a brief comparative study on specification of system being developed / analyzed)</i>			/5	/10	/10	/15
Design <i>(hardware / software architecture)-More than one design solution provided and implemented, with a comparative study</i>			/10	/30	/30	/40
Novelty of the Project <i>(Originality in Methodology, Experimentation / Design / Analysis / Instrumentation / Simulation and Expected Results)</i>			/10	/10	/10	/20



	Parameters	Comments			Marks		
		Guide	Assessors	Guide (50)	Assessors (100)	Total (150)	
I	II		I	II	Avg.		
Oral Presentation <i>(well organized, clear presentation, demo included, all members have equal participation and allocated time well utilized)</i>			/10	/20	/20	/20	/30
Viva-Voce <i>(Technical Knowledge related to the Project)</i>			/5	/10	/10	/10	/15
Contributions to the Work <i>(Contributes to the team, cooperates in the team, and mentors /leads the team)</i>			/5	/10	/10	/10	/15
An individual			Total /50	/100	/100	/100	/150
		Signature					—

Project Implementation Details

Week 9

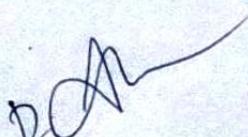
Activity as per work Plan: Incorporate / Modify the project work based on suggestions given by the project assessors along with supervisor.

Work carried out (Individual contribution to the project):

- Learned about python and its libraries

Remark(s) by Guide(s):

- asked them to test whether voice note and alert sound is generated for some of the important traffic signs.
-



Signature of Guide

Date:

Project Implementation Details

Week 10

Activity as per work Plan: **Incorporate / Modify the project work based on suggestions given by the project assessors along with supervisor.**

Work carried out (Individual contribution to the project):

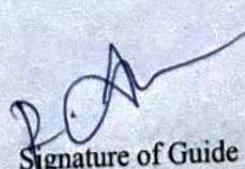
- Tested whether the traffic sign is detected or not.

Remark(s) by Guide(s):

To focus more on report and conference part

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Signature of Guide

Date:

Project Implementation Details

Week 11

Activity as per work Plan: Compare the proposed method / idea / Architecture with existing system by its performance metrics.

Work carried out (Individual contribution to the project):

- Tested whether the voice note for some of the traffic signs is generated or not.
- Tested whether the alert sound is produced for the danger sign or not.

Remark(s) by Guide(s):

- Draft paper for International Conference.
-
-



Signature of Guide

Date:



Evaluation Rubrics

Department of Information Technology

Project work - Continuous Assessment for THIRD REVIEW (Max. 250 Marks)

Name of Student : BAVADHARANI MP
 Class : B.TECH INFORMATION TECHNOLOGY

Register No. : 182IT119
 Project Title : TRAFFIC SIGN CLASSIFICATION USING
 DEEP LEARNING

Parameters	Comments	Assessors	Guide (75)	Assessors (175)			Total (250)	Marks
				I	II	Avg.		
Project Work Plan <i>(How the project will be implemented to achieve the Outcome, Including Inputs, Activities, Timeframe, Role Assignment, and Outputs; Gantt Chart included)</i>			/5	/10	/10	/10	/15	
Effective utilization of the Modern Tool <i>(Implementation, Testing & validation)</i>			/5	/10	/10	/10	/15	
Analysis of Results & Discussions <i>(Included clear analysis, along with advantages and disadvantages, Conclusions)</i>			/10	/30	/30	/30	/40	
Cost Benefit Analysis <i>(Budget)</i>			/5	/5	/5	/5	/10	
The Project Report <i>(well organized, clear objectives and outcomes for every chapter)</i>			/5	/15	/15	/15	/20	



Parameters	Comments			Marks			
	Guide	Assessors	Guide (75)	I	II	Avg.	Total (250)
The Paper / Poster Presentation <i>(The Paper / Poster is well designed and includes the introduction, Literature survey, results and conclusion and references)</i>			/10	/15	/15	/15	/25
Originality Score <i>(Plagiarism should be less than 30%)</i>			/10	/15	/15	/15	/25
Oral Presentation <i>(well organized, clear presentation, demo included, all members have equal participation and allocated time well utilized)</i>			/10	/30	/30	/30	/40
Viva-Voce <i>(Technical Knowledge related to the project)</i>			/10	/20	/20	/20	/30
Contributions to the Work <i>(Contributes to the team, cooperates in the team, and mentors / leads the team)</i>			/5	/25	/25	/25	/30
An individual	Total	/75	175	175	175	175	/250
	Signature						—



Project Implementation Details

Week 13-14

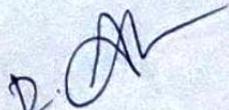
Activity as per work Plan: Prepare an intensive "Project Report" along with "Plagiarism Report".

Work carried out (Individual contribution to the project):

- Completed the project report
- Also applied for conference

Remark(s) by Guide(s):

- If any new features can be added, include in the project.
-
-



Signature of Guide

Date:

Project Implementation Details

Week 15

Activity as per work Plan: **Project Execution / Demo and submit the *Project Submission Form* to Project Coordinator.**

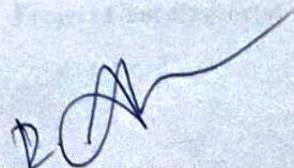
Work carried out (Individual contribution to the project):

- Created a demo for the project.

Remark(s) by Guide(s):

-
-
-

Date:



Signature of Guide



PROJECT SUBMISSION FORM

(The student should get the approval from the supervisor and project coordinator consent on completing the project work and submit the same to the HoD to get the project report signature)

To be completed by the supervisor(s)

Name of the supervisor								
Attendance Percentage of the Student								
Project progress Log book <i>(Tick the appropriate option)</i>	Excellent	Good	Fair	Poor	Very Poor			
Review Marks	Review I (100 Marks)		Review II (150 Marks)		Review III (250 Marks)			
Plagiarism Percentage								
Comment(s)								

To be completed by the project coordinator(s)

Name of the project coordinator						
Expected outcome <i>(Tick the appropriate option)</i>	Achieved		In process		Not Achieved	
Recommendation and Comments						

Project Supervisor(s)

Project Coordinator(s)

Project work - Continuous Assessment (Max. 500 marks)

Project Work	CO#	POs & PSOs	Marks
First Review			
Literature Survey	CO1	PO12	25
Aim & Objectives of the Project <i>(Problem Statement)</i>	CO2	PO2	10
Scope of the Project <i>(Contribution to society, concern for environment)</i>	CO3	PO6 PO7	10
Need for the Current Study <i>(Compliance to Standards-Clear statement of existing Standards / Norms, with compliance)</i>	CO4	PO8	10
Feasibility Analysis <i>(Identification of essential concepts- Clear list, description and justification of most essential Mathematical, Science, Engineering and Management Concepts included)</i>	CO6	PO12	10
Proposed Methodology <i>(Proposed and implemented Gantt chart included; with clear distribution of workload among the team members)</i>	CO5	PO11	10
Oral Presentation <i>(well organized, clear presentation, demo included, all members have equal participation and allocated time well utilized)</i>	CO9	PO10	15
Viva-Voce <i>(Technical Knowledge related to the project)</i>	CO6	PO12	5
Role Clarity <i>(Contributes to the team, cooperates in the team, and mentors / leads the team)</i>	CO10	PO9	5
Second Review			
Project Work Plan <i>(How the project will be implemented to achieve the Outcome, Including Inputs, Activities, Timeframe, Role Assignment, and Outputs; Gantt Chart included)</i>	CO5	PO11	15
Choice of components / modules for system development <i>(Preparing the equipment / component list- An Exhaustive list of possible Modern Tools/Components that may be used to implement the project is provided, together with a brief comparative study on specification of system being developed / analyzed)</i>	CO6	PO12 PO5	15
Design (hardware / software architecture) <i>(More than one design solution provided and implemented, with a comparative study)</i>	CO7	PO1 PO3	40
Novelty of the Project <i>(Originality in methodology, Experimentation / Design / Analysis / Instrumentation / Simulation and Expected Results)</i>	CO9	PO 10	20
Oral Presentation <i>(well organized, clear presentation, demo included, all members</i>	CO9	PO10	30

Project Work	CO#	POs & PSOs	Marks
<i>(have equal participation and allocated time well utilized)</i>			
Viva-Voce <i>(Technical Knowledge related to the Project)</i>	CO6	PO12	15
Contributions to the Work <i>(Contributes to the team, cooperates in the team, and mentors / leads the team)</i>	CO10	PO9	15
Third Review			
Project Work Plan <i>(How the project will be implemented to achieve the Outcome, Including Inputs, Activities, Timeframe, Role Assignment, and Outputs; Gantt Chart included)</i>	CO5	PO11	15
Effective Utilization of the Modern Tool <i>(Implementation, Testing & Validation)</i>	CO6	PO 5	15
Analysis of Results & Discussions <i>(Included clear analysis, along with advantages and disadvantages, Conclusions)</i>	CO8	PO4	40
Cost Benefit Analysis <i>(Budget)</i>	CO5	PO11	10
The Project Report <i>(well organized, clear objectives and outcomes for every chapter)</i>	CO9	PO10	20
Publications (Conference / Journal / Patent) <i>(The Paper / Poster / Patent is well designed and includes the introduction, Literature survey, results and conclusion and references)</i>	CO9	PO10	25
Originality Score <i>(Plagiarism should be less than 30%)</i>	CO4	PO 8	25
Oral Presentation <i>(well organized, clear presentation, demo included, all members have equal participation and allocated time well utilized)</i>	CO9	PO10	40
Viva-Voce <i>(Technical Knowledge related to the project)</i>	CO6	PO 12	30
Contributions to the Work <i>(Contributes to the team, cooperates in the team, and mentors / leads the team)</i>	CO10	PO 9	30