



VIMAL JYOTHI ENGINEERING COLLEGE

APPROVED BY AICTE AND AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Jyothi Nagar, Chemperi P.O, Kannur Dt. Kerala - 670632 | www.vjec.ac.in

INTERNSHIP

DEPARTMENT OF CIVIL ENGINEERING





VIMAL JYOTHI ENGINEERING COLLEGE

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERELA

Affiliated to APJ Abdul Kalam Technological University, Approved by AICTE
ISO 9001 : 2015 Certified | Accredited by Institution of Engineers (India), NBA, NAAC
Ph: 0490 2212240, 2213399 Email: office@vjec.ac.in Website: www.vjec.ac.in

NAAC Cycle 2

Criterion: 1.3.2

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VIMAL JYOTHI ENGINEERING COLLEGE DEPARTMENT OF CIVIL ENGINEERING LIST OF STUDENTS UNDERTAKING INTERNSHIP		
SLNO	REGISTER NUMBER	NAME
1	LVML20CE083	AJAY JOHN
2	LVML20CE085	KIRANDEV
3	LVML20CE086	LITWIN AUGUSTIA XAVIER
4	VML19CE004	ABHINAV PM
5	VML19CE020	ANAGHA MOHAN NV
6	VML19CE021	ANAGHA PREMARAJAN V
7	VML19CE037	ASWATHI TP
8	VML19CE055	HRUTIKA M R
9	VML20CE002	ABHIJITH M
10	VML20CE003	ABHIJITH SURENDRAN
11	VML20CE004	ABHINAND K
12	VML20CE008	ADITHYA RAJ
13	VML20CE011	AISHA NUHA
14	VML20CE013	AKSHATH
15	VML20CE014	ALAN JOSHY
16	VML20CE015	AMAIN P
17	VML20CE026	APARNA CHANDRAN P P
18	VML20CE032	ASHUTHOSH P
19	VML20CE033	ASWANTH BHASKARAN V
20	VML20CE035	ATHIRA AJITH
21	VML20CE045	GOPIKA GANGADHARAN
22	VML20CE064	SALONIYA K
23	VML20CE067	SARANG CK
24	VML20CE070	SHAFNA C
25	VML20CE072	SIDDARTH. D
26	VML20CE076	TEENA VINOD
27	VML20CE078	THEJAL PRASANTH
28	VML20CE081	VISHNUDAS PV



INTERNSHIP REPORT

submitted by

ANAGHA PREMARAJAN V (VML19CEO21)

NITHIN JOSE (VML19CE075)

VISMAYA MOHAN K (VML19CE104)

to

the APJ Abdul Kalam Technological University

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

of

Bachelor of Technology

In

Civil Engineering



Department of Civil Engineering

VIMAL JYOTHI ENGINEERING COLLEGE

CHEMPERI

OCTOBER 2022

DECLARATION

We undersigned hereby declare that the internship report submitted for partial fulfillment of the requirements for the award of degree of Bachelor of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by us under the supervision of scientist Arun Chandran. This submission represents our works during the internship in our own words and where ideas or words of other have been included. We also declare that we have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in our submission.

Place: Thiruvananthapuram

Date: 20/10/2022



CERTIFICATE

This is to certify that the following B. Tech students of **Vimal Jyothi Engineering College, Kannur**, affiliated to APJ Abdul Kalam Technological University have successfully completed Internship Training in **Transportation Planning and Engineering Division** under the guidance of **Shri. Arun Chandran** at **KSCSCTE-NATPAC**, Thiruvananthapuram from 13th October, 2022 to 20th October, 2022. They were involved in the project "Development of parking policy framework for Kerala". During the period of training, the students were punctual, hardworking and showed a keen interest to learn and their performance were satisfactory.

1. **Anagha Premarajan V (VML19CE021)**
2. **Nithin Jose (VML19CE075)**
3. **Vismaya Mohan K (VML19CE104)**

Arun Chandran

Senior Scientist

Transportation Planning and Engineering Division

KSCSTE-NATPAC

Thiruvananthapuram, Kerala

Aakkulam

20/10/2022



ACKNOWLEDGEMENT

We, NITHIN JOSE, ANAGHA PREMARAJAN V, VISMAYA MOHAN K would like to thank our guide Shri. Arun Chandran, SENIOR SCIENTIST, KSCSTE-NATPAC, Kerala for his guidance, valuable suggestions and extending all the facilities to carry out for this internship. I also thank Mr. Althaf J Muhammed, Ms. Greeshma Gireesh PROJECT ENGINEER, KSCSTE-NATPAC, Kerala for helping me with the data provided and valuable suggestions in the study.

I would like to express my sincere gratitude to KSCSTE-NATPAC, Kerala for providing mean opportunity to carryout internship work. Our acknowledgement would not be complete without thanking our beloved parents and above all, we'd like to express our sincere gratitude to God Almighty for showering his blessings upon us.

It is with great enthusiasm and learning spirit that we bring out this internship report. We also feel that it is the right opportunity to acknowledge for the support and guidance from all those who helped us during the course of completion of our internship.

INTERNSHIP REPORT

PROJECT 1

We got an opportunity to be a part of the project "Development of parking policy framework for kerala" under the guidance of Shri. Arun Chandran, senior scientist, in NATPAC, Thiruvananthapuram.

Parking is considered as the major problem in urban areas/cities in the state of Kerala. Adequate off-street parking supply is needed to discourage on-street parking and there by reduces traffic congestion in cities.

Cities are places where high concentration of economic activities are present and are complex spatial structures that are supported by transport systems. Data about the actual parking capacity and use of parking is absent in most urban areas. The vehicles population is expanding beyond all prediction making parking demand projection unrealistic.

Lack of hard data makes it difficult to fully understand the real problem and develop effective policies. We were involved in a small part of this project in the field of data collection for finding solution for the and its tabulation needed for the project

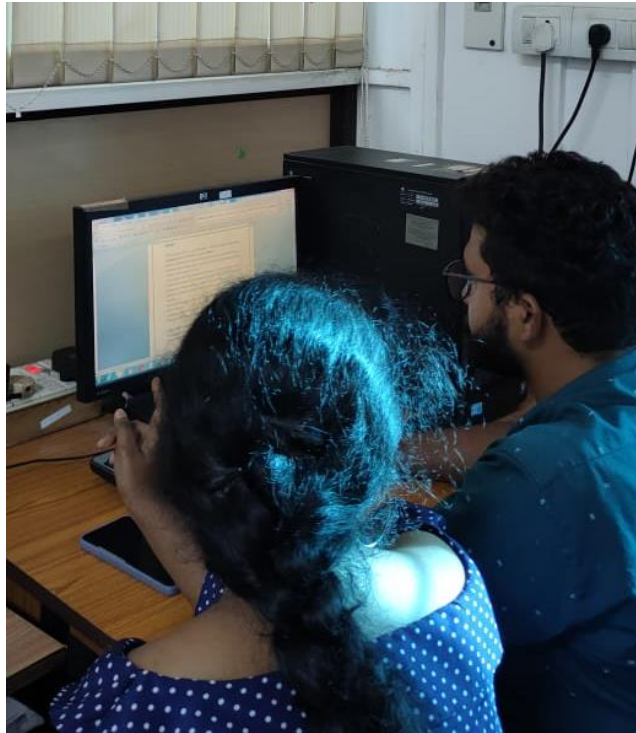
METHODS OF DATA COLLECTION

There are two broad approaches to data collection:

Observational (passive) surveys – where surveyors (human or mechanical) record the occurrence (and often time of occurrence) of specified transport events or phenomena, such as the passage of vehicles past a point on the road, the arrival of trucks at a warehouse, or the number of passengers exiting from a railway platform in a specified time interval

Interview (active) surveys – where the surveyors make contact with the individual travelers, customers or decision makers to seek information directly from them

The method which done here was an active interview where the data was collected by interviewing random persons across the street and collecting information regarding the issues prevailed with respect to the project we are dealing with. The obtained data was converted to a spreadsheet for the analysis



Data entry and tabulation of conducted survey

PROJECT 2

Another project we were involved was about the traffic issue present at Eastfort and for the purpose of fetching a solution traffic survey should be conducted. We visited the site and collected relevant data about the current situation for developing a remedial measure. For that purpose, we helped in the preparation of the questionnaire required for conducting the survey.

PROJECT 3

We were also trained in the real-life application of the various lab experiments which were conducted back in the college. It really helped in the understanding the necessity in various works. Main task was the pulverization of the soil collected form the site at Thrissur.. Pulverized soil was used to conduct various tests to determine the properties of soil, which depends on the construction.



Pulverization of the soil

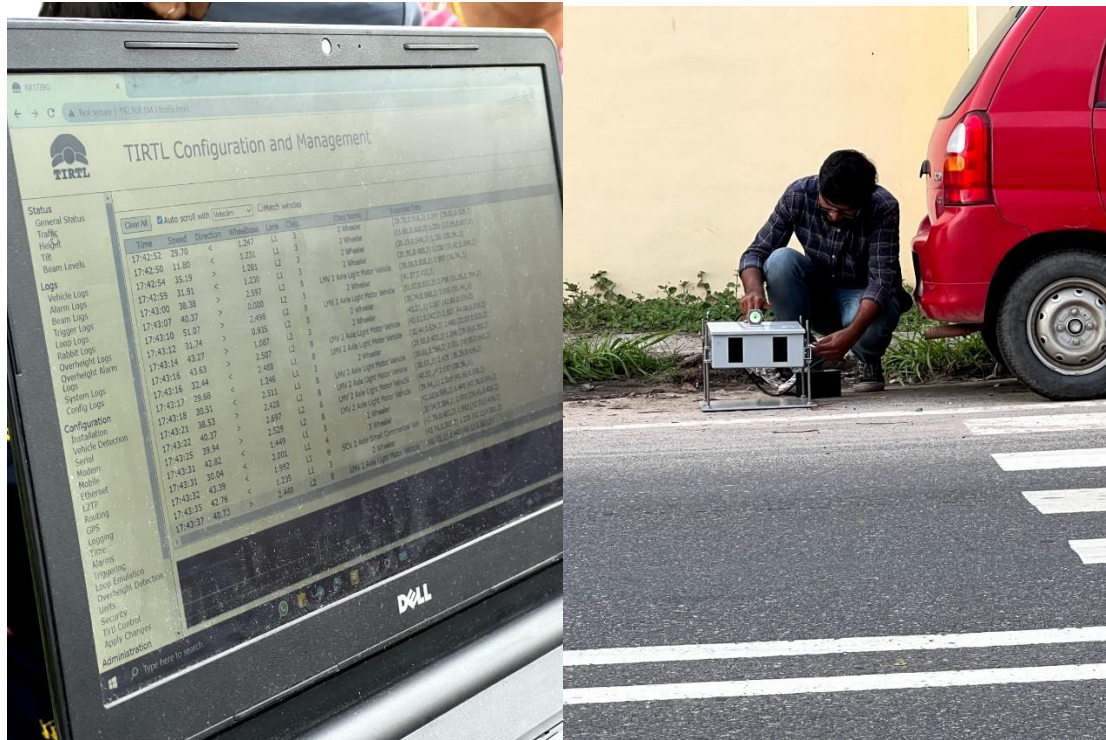
TIRTL SOFTWARE

The Infra-Red Traffic Logger, more commonly known simply by the acronym TIRTL, is a multi-purpose traffic sensor that can be used as a traffic counter, speed sensor, red light camera sensor, heavy vehicle tracker, over height vehicle sensor, rail crossing sensor and network management system.

This instrument was made us available to study the new technologies for the data collection with minimal human effort and obtaining maximum data. This instrument helps to transfer the data to a spread sheet and each area of interest can be obtained individually and interpreted.

The devices has two RS-232 ports for data transfer. There are optional inbuilt GSM, PSTN, and satellite phone modems available. The unit has the ability to stream traffic information real-time which can drive intelligent traffic signs and send data back to traffic operation centers. There are also adapters available for connection to traffic cameras for enforcement purposes. This system consists of a receiver unit and transmitter unit placed on opposite sides of the road perpendicular to the direction of travel. The transmitter sends two cones of infrared light across the roadway, and the receiver records vehicles as they break and remake these cones. TIRTL transmitter's infrared cones cross each other and form two straight and two diagonal beam pathways. When a vehicle crosses the beam pathways, TIRTL records two beam events; it records one from the vehicle breaking and one leaving the beam pathway. These two beams events are recorded for all four beam pathways. Thus, eight timestamped events are generated per axle. The velocity is derived from the timestamps of these beam events.

Since the velocity of each vehicle wheel is known and a timestamp is recorded for each axle crossing each beam, the interwheel spacings can be determined. Once the interaxle spacings are known, it is compared to a table of interaxle spacing ranges stored in the unit to determine the correct classification of the vehicle. The results are stored on a per vehicle basis



Images related to TIRTL



CERTIFICATE

Of Participation

This is to certify that Mr./Mrs. *Adithya Raj B.P.*

Has successfully participated in 5 days workshop entitled on the total station
from 2023 27 Feb to 03 Mar conducted by ALG International Institute of Technology,
Kannur, Kerala.

A handwritten signature in black ink, appearing to be "A", written over a horizontal line.

*Technical Head
ALG International*



A handwritten signature in black ink, appearing to be "Mee", written over a horizontal line.

*General Manager
ALG International*



CERTIFICATE

Of Participation

This is to certify that Mr./Mrs. Aswathi T.P
Has successfully participated in 5 days workshop entitled on the total station
from 2023 27 Feb to 03 Mar conducted by ALG International Institute of Technology,
Kannur, Kerala.



Technical Head
ALG International





General Manager
ALG International



CERTIFICATE

Of Participation

This is to certify that Mr./Mrs. Haruthika M.R.....

Has successfully participated in 5 days workshop entitled on the total station
from 2023 27 Feb to 03 Mar conducted by ALG International Institute of Technology,
Kannur, Kerala.

*Technical Head
ALG International*



*General Manager
ALG International*



CERTIFICATE

Of Participation

This is to certify that Mr./Mrs. Abhinav. P.M
Has successfully participated in 5 days workshop entitled on the total station
from 2023 27 Feb to 03 Mar conducted by ALG International Institute of Technology,
Kannur, Kerala.

Technical Head
ALG International



General Manager
ALG International




CERTIFICATE Of Participation

This is to certify that Mr./Mrs. Anagha Mohan N.V
Has successfully participated in 5 days workshop entitled on the total station
from 2023 27 Feb to 03 Mar conducted by ALG International Institute of Technology,
Kannur, Kerala.



Technical Head
ALG International





General Manager
ALG International