

# **MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR**

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)



**Final Year Internship Report**

**on**

**ADVANCE ETL PIPELINE in BUSINESS INTELLIGENCE**

A Final Year Internship report submitted in partial fulfilment of the requirement for the degree of

**BACHELOR OF TECHNOLOGY**

**in**

**INFORMATION TECHNOLOGY**

Submitted by:

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**0901IT181038**

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Submitted to:

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE**

**GWALIOR - 474005**

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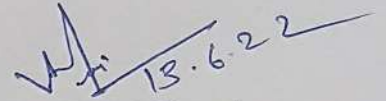
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**CERTIFICATE**

This is certified that **Neeraj Gopal Verma** (0901IT181038) has submitted the internship report titled **ADVANCE ETL PIPELINE in BUSINESS INTELLIGENCE** under the mentorship of **Prof. ABHILASH SONKER**, in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in **Information Technology** from Madhav Institute of Technology and Science, Gwalior.



**Prof. Abhilash Sonker**  
Faculty Mentor  
Information Technology



**Dr. Akhilesh Tiwari**  
Professor and Head,  
Department of IT

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**DECLARATION**

I hereby declare that the work being presented in this internship report, for the partial fulfilment of requirement for the award of the degree of Bachelor of Technology in Information Technology at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Prof. ABHILASH SONKER**

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Date: 02/06/2022  
Place: Gwalior



Neeraj Gopal Verma  
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I am sincerely thankful to my faculty mentors. I am grateful to the guidance of **Prof. Abhilash Sonker**, for his continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.



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## **ABSTRACT**

This project report describes my work for the development of “Vehicle Fault analysis”, an enterprise application project. An Enterprise application project is a software application that helps enterprise in managing their business-related activities. They are huge and complex and solve real time problems to fulfil the needs of the enterprises. The existing systems are good, but as we know the habit of people driving carefully is decreasing day by day.so we have to make user aware about the fact of driving safely and carefully which is only possible when you have the vehicle in appropriate condition. They had some less features, so we want to provide the best option and analyse the facts and conditions of vehicle faults in best possible way in this project.

As the title of the project reflects this is a analysis based software which helps in analysing most technical vehicle Faults and helps in better decision making regarding the vehicle condition which further lead to prevent life causing accidents. It is easy to use and surely gives better results and more option to explore.

## सार:

यह परियोजना रिपोर्ट एक उद्यम अनुप्रयोग परियोजना "वाहन दोष विश्लेषण" के विकास के लिए मेरे काम का वर्णन करती है। एंटरप्राइज एप्लिकेशन प्रोजेक्ट एक सॉफ्टवेयर एप्लिकेशन है जो उद्यम को उनके व्यवसाय से संबंधित गतिविधियों के प्रबंधन में मदद करता है। वे विशाल और जटिल हैं और उद्यमों की जरूरतों को पूरा करने के लिए वास्तविक समय की समस्याओं को हल करते हैं। मौजूदा सिस्टम अच्छे हैं, लेकिन जैसा कि हम जानते हैं कि लोगों की सावधानी से गाड़ी चलाने की आदत दिन-ब-दिन कम होती जा रही है। उनके पास कुछ कम विशेषताएं थीं, इसलिए हम इस परियोजना में सबसे अच्छा विकल्प प्रदान करना चाहते हैं और वाहन दोषों के तथ्यों और स्थितियों का सर्वोत्तम संभव तरीके से विश्लेषण करना चाहते हैं। जैसा कि परियोजना का शीर्षक दर्शाता है कि यह एक विश्लेषण आधारित सॉफ्टवेयर है जो अधिकांश तकनीकी वाहन दोषों का विश्लेषण करने में मदद करता है और वाहन की स्थिति के बारे में बेहतर निर्णय लेने में मदद करता है जो आगे चलकर दुर्घटनाओं को रोकने में मदद करता है। इसका उपयोग करना आसान है और निश्चित रूप से बेहतर परिणाम और तलाशने के लिए अधिक विकल्प देता है

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## **LIST OF ABBREVIATIONS**

<b>Abbreviation</b>	<b>Description</b>
<b>BI</b>	Business Intelligence
<b>OLAP</b>	Online Analytic Processing
<b>OLTP</b>	Online Transaction Processing
<b>ETL</b>	Extract, Transform, and load
<b>SSMS</b>	SQL Server Management Studio
<b>SSIS</b>	SQL Server Integration Service
<b>SSAS</b>	SQL Server Analysis Service
<b>SSRS</b>	SQL Server Reporting Service
<b>VM</b>	Virtual Machine

# Chapter 1:

## INTRODUCTION

Business intelligence (BI) is an umbrella term for the technique that allows data preparation, data mining, facts/data visualization and data management. BI tools and methods enables end-users to perceive actionable statistics from raw data, facilitating data-driven decision making within organisations throughout a variety of industries. BI systems are anticipated to have dashboarding, reporting and information visualization capabilities. To remain competitive, BI platforms are making use of integrating ML and AI. At the core, they depend on data warehouses, ETL, and OLAP.

Much greater than a specific “thing,” BI is as an alternative an umbrella term that covers the processes and methods of collecting, storing, and analysing facts from enterprise operations or activities to optimize performance. All of these things come collectively to create a complete view of enterprise to help users make better, actionable decisions. Over the previous few years, BI has advanced to include greater techniques and activities to help improve performance. These processes include:

- **Data mining:** Using databases, statistics, and machine learning to uncover trends in large datasets.
- **Reporting:** Sharing data analysis to stakeholders so they can draw conclusions and make decisions.
- **Performance metrics and benchmarking:** Comparing current performance data to historical data to track performance against goals, typically using customized dashboards.
- **Descriptive analytics:** Using preliminary data analysis to find out what happened.
- **Querying:** Asking the data-specific questions, BI pulling the answers from the datasets.
- **Statistical analysis:** Taking the results from descriptive analytics and further exploring the data using statistics such as how this trend happened and why.
- **Data visualization:** Turning data analysis into visual representations such as charts, graphs, and histograms to more easily consume data.

### 1.1 Objective:

- Learn and apprehend the techniques involved in BI.

- Learn how to collect, arrange and interpret the data for related departments to make an appropriate decision under the uncertainty to achieve the organizational goal.
- Learn how to process beneficial facts from collections of data.
- Create user-friendly reports using BI tools.

## 1.2 Scope:

- Large information handling of vehicles
- The reports are also designed to easily filter data on various perimeters.
- More data can be added or updated on real time basis. Where the changes are directly reflect in the dashboards. Also the vehicle faults can be more categorised.

## 1.3 Internship Features in BI:

Different organisation will make investments in BI solution for extraordinary reasons relying on their precise instances and industry. Some of the features of Business Intelligence are- :

- Better decision making
- Enhance communication
- Reduce bottlenecks
- Save time and resources.

## 1.4 System Requirement:

### Hardware Requirements:

RAM	:	4GB
Processor	:	Intel i3 Processor(minimum)

Hard Disk: : 500 GB HDD  
Monitor: : 12" minimum needed

**Software Requirements:**

Operating system : Windows 8/10  
Browser : Google chrome /Firefox  
Language: : Python, MySQL, Power Bi Desktop

**Extra Software Required:** Visual studio code, SSMS, Google collab

## Chapter 2:

# LITERATURE REVIEW

The term '**Business Intelligence**' was coined by Howard Dresner in 1989. (Gartner).

He defined BI as: "A set of concepts and methodologies to improve decision making in business through use of facts and fact-based system".

### 2.1 Business Intelligence Architecture:

BI is a term used to describe a comprehensive, cohesive, and built-in set of tools and techniques used to capture, collect, integrate, store, and analyse information with the aim of producing and presenting data used to support business decision making.

BI is a framework that permits an enterprise to transform data into information, information into knowledge, and information into wisdom. Implementing BI in an enterprise includes apprehend not only data (internal and external) but also the metadata, or information about the data. BI presents a well-orchestrated framework for the management of data that works throughout all tiers of the organization.

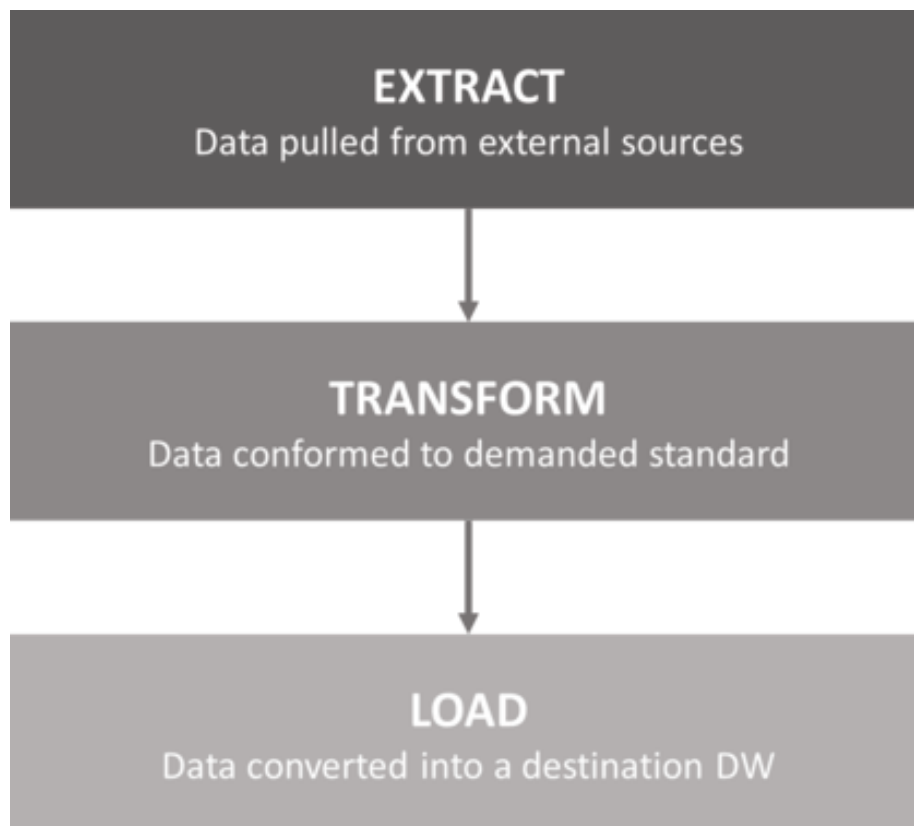


Fig: Flow chart of working of an ETL Tool

**Data Analysis:** Data analysis is a procedure of inspecting, cleansing, transforming, and modelling information with the purpose of discovering beneficial information, informing conclusions, and helping decision-making.

## 2.1 Need of Business Intelligence:

- To gain competitive advantage in the marketplace by making better, faster and fact based decisions.
- To retain customers by understanding their behaviour and providing them with an appropriate experience.
- To improve employee productivity by identifying and removing bottleneck processes.
- To improve operation efficiency by optimizing service offerings.
- To bring new value to the business by recognizing the changing business needs.

## 2.2 Business Intelligence Tools:

BI tools are kinds of application software program that collect and analyse huge amount of unstructured information from inside and exterior systems, which includes books, journals, documents, images, files, email, video, and other enterprise sources.

### 2.3.1 SQL Server Management studio (SSMS)

SQL Server Management Studio (SSMS) is an integrated platform for managing any SQL infrastructure. SSMS is used to access, configure, administer, manage, and improve all factors of SQL Server, Azure SQL Database, Azure SQL Managed Instance, Azure Synapse Analytics and SQL Server on Azure VM. SSMS offers a single complete utility that combined a wide group of graphical tools with many script editors to gives access to SQL Server for developers and database administrators of all skill levels.

SQL Server Contains Two Types Of Databases:

1. **OLTP (Online Transaction Processing)**- This type of database contains normalized data, without redundancy or duplicate data values.
2. **OLAP (Online Analytical Processing)**- This type of database contains demoralized data i.e. redundancy will be there.

**Services of SSMS:**

- **Database Engine**- It is the default server type. Which is used to store, access and manage the data from the database.
- **Integrative Service (SSIS)**: It is used to extract data, transform and load it at destination source.
- **Analysis Service (SSAS)**: Used to create cubes and present the data in multiple dimensions and preview in hierarchical manner.
- **Reporting Service (SSRS)**: Used to create reports and dashboards in different formats.

### 2.3.2 MongoDB:

MongoDB is an open-source document-oriented database that is developed to store a huge scale of information and additionally lets in you to work with that information very efficiently. It is classified under the NoSQL (Not only SQL) database due to the fact the storage and retrieval of information in the MongoDB are not available in the form of tables.

### Features of MongoDB:

- **Schema-less database-** Means one collection can keep various documents in it.
- **Document Oriented:** All the information stored in documents rather than tables like in RDBMS.
- **Scalability:** It provides horizontal scalability by making use of Sharding.
- **Indexing:** All the facts in the documents are indexed with primary and secondary indices it makes easy to retrieve the data.
- **Aggregation:** able to perform aggregation operations on grouped data and get a single computed result.

### 2.3.3 Power BI:

Power BI is a collection of software program services, apps, and connectors that work collectively to execute your unrelated sources of information into visually immersive, coherent, and interactive insights. Your information can be an Excel spreadsheet, or a group of cloud-based and on-premises hybrid data warehouses. Power BI lets you effortlessly connect to your datasources, visualize and find out what's important, and share that with everybody or anyone you want.

### 2.3.4 Agile Methodology:

The **Agile software development** methodology is one of the easiest and effective processes to turn a vision for a business requirement into software solutions. Agile is a terminology used to describe software development approaches that includes continual planning, learning, improvement, team collaboration, evolutionary development, and early delivery. It encourages flexible responses to change.

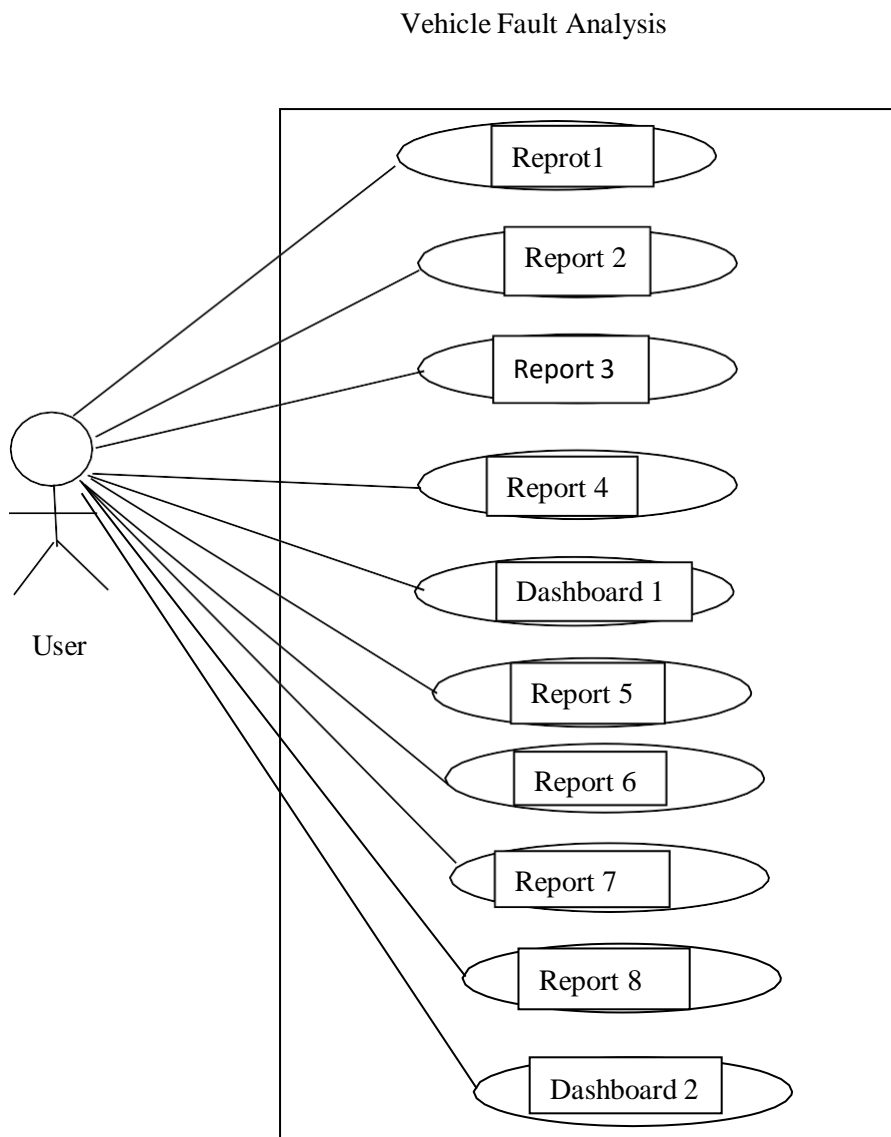
## Chapter 3:

### PROJECT ANALYSIS

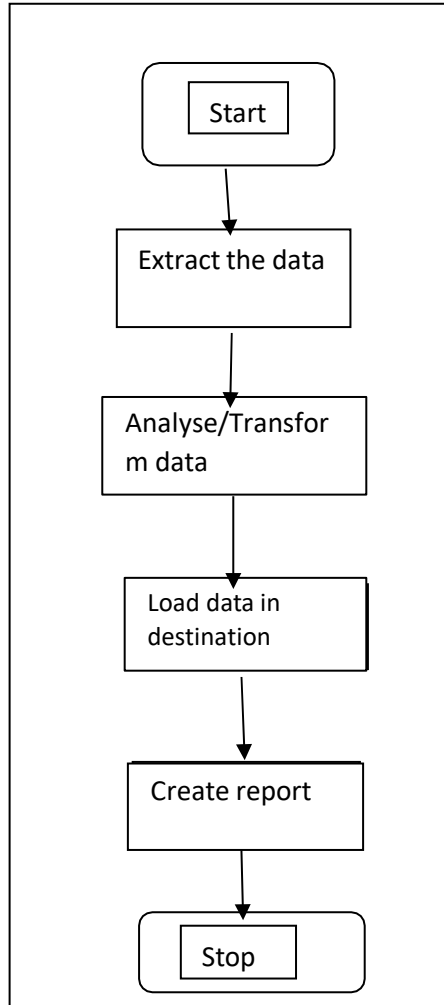
#### Project: “Vehicle Fault analysis”

As the title of the project reflects this is a analysis based software which helps in analysing most technical vehicle Faults on the historic, present as well as real time based data and helps in better decision making regarding the vehicle condition by diagnosing and monitoring the faults which further lead to prevent life causing accidents. It is easy to use and surely gives better results and more option to explore.

#### 3.1 Use Case diagram:



### 3.2 Flow chart diagram:



## Chapter 4:

### FINAL ANALYSIS AND DESIGN

In my internship, I was assigned to a team of 6 members. We were allocated to a project titled as “Vehicle Fault Analysis”. The main features and goal of the project are as follows:

- Fault analysis refers to the most technical faults found in the two wheeler and cars category of vehicles.
- In this mainly we perform analysis on the historic data present in the dataset and also on real time data by applying different perimeters and filter the data.
- It is proven to be helpful in preventing the huge life causing accidents by properly monitoring the vehicle condition and faults as well as helps in improving the countries economic growth by removing the unsuitable vehicles which are causing harmful particles in environment like excessive amount of CO2.
- Majorly this project is to analyse the given dataset and to represent the data in suitable data visualization using different BI tools.

#### **Task Performed:**

- Make various user stories to determine the requirements of user in agile sheet in order to use agile methodology.
- Extracted the dataset created with the help of SSMS and Visual studio and transform the information.
- Apply different filters and create various perimeters.
- Delivered the report in the form of data visualization for better decision making.

## Data sources:

### Two wheeler dataset:-

Bike_Name	Price	Kms_Driven	Age	Horse Power	Brand	Tier	Pressure Range	Oil Change Duration	Battery Voltage	Carbon Deposite	Engine Oil Status	Air Filter	Tire Press	
Benelli 302R 300CC	240000	15025	3	302	Benelli			22	2	19	Not Present	Fresh	Not Changeable	Low
Benelli TNT 300	210000	21000	6	300	Benelli			49	6	6	Not Present	Dirty	Changeable	High
Benelli TNT 600i	480000	14200	4	600	Benelli			47	0	14	Not Present	Fresh	Not Changeable	High
Benelli TNT 600i ABS	475000	11500	3	600	Benelli			43	6	6	Not Present	Dirty	Not Changeable	High
Ducati 1299 Superleggera	800000	3	3	1299	Ducati			40	6	14	Not Present	Dirty	Not Changeable	Moderate
Ducati Scrambler 1100 Special	1350000	190	1	1100	Ducati			30	1	18	Not Present	Fresh	Not Changeable	Moderate
Harley-Davidson Street 750	300000	3500	6	750	Harley-Davidson			43	6	3	Not Present	Dirty	Not Changeable	High
Hyosung GT650R	400000	1800	4	650	Hyosung			47	3	7	Not Present	Fresh	Not Changeable	High
Kawasaki Ninja 650cc	290000	11350	7	650	Kawasaki			37	2	3	Not Present	Fresh	Not Changeable	Moderate
Kawasaki Z900	935000	2500	2	900	Kawasaki			35	10	10	Not Present	Dirty	Not Changeable	Moderate
mahaya FZ 150cc	40000	35700	8	150	mahaya			42	6	3	Present	Dirty	Changeable	High
mahaya FZ S V 2.0 150cc	60000	15000	5	150	mahaya			29	11	15	Not Present	Dirty	Not Changeable	Moderate
mahaya FZ S V 2.0 150cc-Ltd. Edition	80000	10000	3	150	mahaya			45	11	18	Not Present	Dirty	Not Changeable	High
mahaya FZ V 2.0 150cc	45000	23000	6	150	mahaya			28	1	17	Not Present	Fresh	Changeable	Moderate
mahaya FZ16 150cc	50000	19000	6	150	mahaya			33	0	13	Not Present	Fresh	Not Changeable	Moderate
mahaya FZ25 250cc	95000	9665	4	250	mahaya			46	10	8	Not Present	Dirty	Not Changeable	High
mahaya FZ25 ABS 250cc	146000	3900	2	250	mahaya			29	9	3	Not Present	Dirty	Not Changeable	Moderate
mahaya FZs 150cc	53499	25000	6	150	mahaya			23	10	8	Not Present	Dirty	Changeable	Low
mahaya SZ 150cc	25000	30000	9	150	mahaya			32	7	17	Present	Dirty	Changeable	Moderate
mahaya YZF R6 600cc	500000	285	5	600	mahaya			43	7	6	Not Present	Dirty	Not Changeable	High
mahaya YZF-R15 2.0 150cc	72000	20000	7	150	mahaya			49	11	15	Not Present	Dirty	Changeable	High
mahaya YZF-R15 S 150cc	63000	16000	5	150	mahaya			40	7	12	Not Present	Dirty	Not Changeable	Moderate
Mahindra Centuro NXT 110cc	28000	45000	2	110	Mahindra			24	7	6	Present	Dirty	Changeable	Low
mkt Duke 200cc	94700	32700	4	200	mkt			49	3	12	Present	Fresh	Changeable	High
mkt Duke 250cc	130000	17500	4	250	mkt			25	11	6	Not Present	Dirty	Not Changeable	Low
mkt Duke 390cc	240000	11000	3	390	mkt			49	6	8	Not Present	Dirty	Not Changeable	High
mkt RC 200cc ABS	179000	3400	2	200	mkt			25	3	6	Not Present	Fresh	Not Changeable	Low

### Cars dataset:-

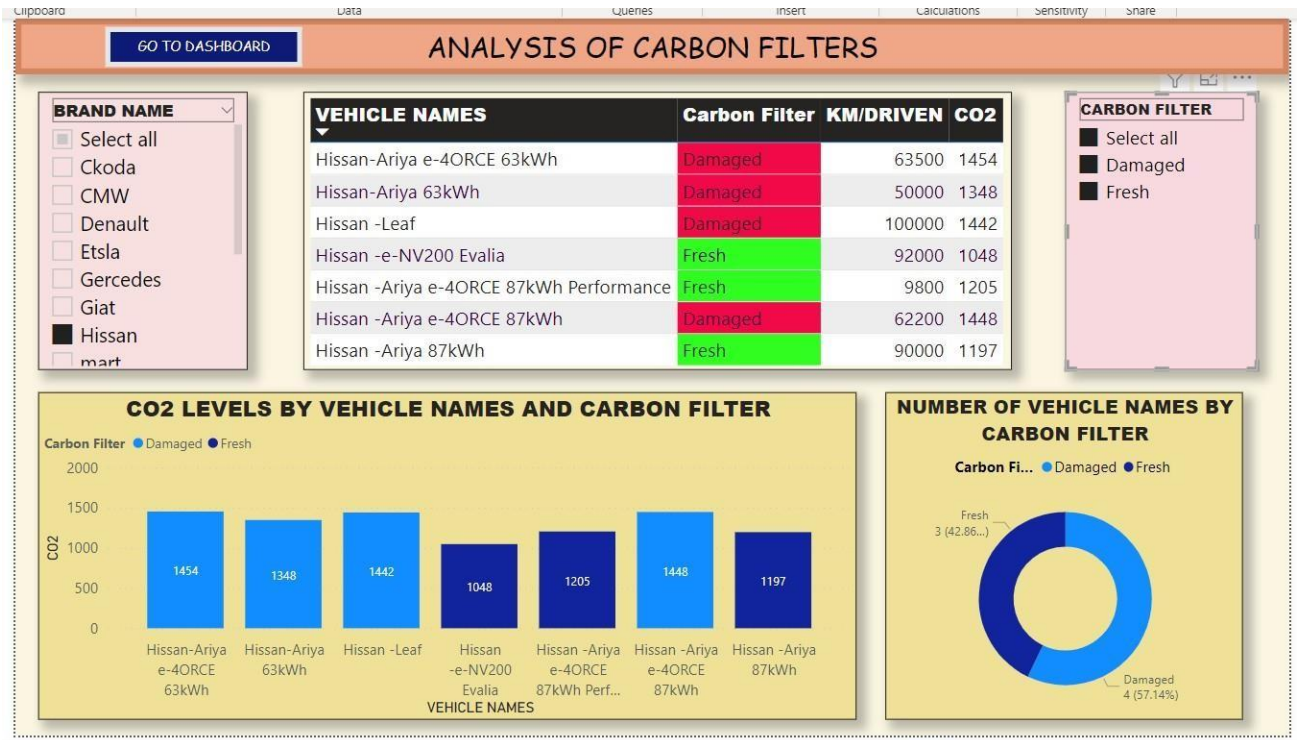
VEHICLE NAMES	ENGINE SURGE TIME	YEAR	SELLING PRICE	FUEL TYPE	TRANSMISSION	WHEEL-BASE	CITY-MPG	HIGHWAY-MPG	KM/DRIVEN	CAR AGE	CO2	RPM LEVEL	PISTON
Always -US		9	2012	275000	Petrol	Manual	102	13	17	60000	10	1617	357
Citroen -e-C4		10	2016	665000	Diesel	Manual	95	16	23	46000	6	1361	1096
Koda -CITIGOe IV		12	2013	1550000	Diesel	Automatic	94	24	29	75800	9	887	1355
Koda -Enyaq IV 50		10	2017	365000	CNG	Manual	93	31	38	78000	5	683	498
Koda -Enyaq IV 60		9	2017	8150000	Diesel	Automatic	94	31	37	6500	5	1457	418
Koda -Enyaq IV 80		9	2006	100000	Petrol	Manual	93	31	38	80000	16	1740	718
Koda -Enyaq IV 80X		7	2017	570000	Diesel	Manual	115	16	18	60000	5	986	304
Koda -Enyaq IV vRS		6	2017	1025000	Petrol	Manual	96	23	30	9000	5	1383	844
CMW -i3 120 Ah		7	2013	390000	Diesel	Manual	103	24	30	33000	9	575	1400
CMW -i4		4	2007	60000	Petrol	Manual	101	21	28	70000	15	640	1128
CMW-i3s 120 Ah		7	2011	350000	Diesel	Manual	115	22	25	230000	11	856	1429
CUPRA -el-Born		7	2011	450000	Diesel	Automatic	96	27	33	130400	11	1743	798
Denault -Kangoo Maxi ZE 33		22	2009	140000	Petrol	Manual	110	22	25	100000	13	1955	1295
Denault -Twingo ZE		13	2018	310000	Petrol	Manual	95	17	23	28000	4	1071	1012
Denault -Zoe ZE40 R110		11	2012	160000	Petrol	Manual	98	26	32	60000	10	1924	1294
Denault -Zoe ZE50 R135		10	2016	900000	Petrol	Automatic	96	27	33	50000	6	548	1028
DS -3 Crossback E-Tense		9	2018	750000	Diesel	Manual	95	17	23	29000	4	1105	502
Etsla -Cybertruck Single Motor		7	2016	495000	Petrol	Manual	96	25	32	11958	6	579	1052
Etsla -Model 3 Long Range Dual Motor		5	2007	60000	Petrol	Manual	88	21	27	70000	15	963	370
Etsla -Model S Long Range		4	2019	1400000	Petrol	Manual	96	27	33	10000	3	1879	766
Etsla -Model S Performance		3	2014	465000	Diesel	Manual	98	26	32	70000	8	1301	901
Etsla -Model X Long Range		5	2017	725000	Diesel	Manual	93	31	38	18500	5	1871	797
Etsla -Model X Performance		3	2014	450000	Diesel	Manual	96	25	32	120000	8	688	1430
Etsla -Model Y Long Range Performance		4	1996	250000	Diesel	Manual	98	26	32	35000	26	1310	1116
Etsla -Roadster		2	2009	150000	Petrol	Manual	93	31	38	79000	13	1628	802
Etsla-Cybertruck Dual Motor		5	2009	151000	Petrol	Manual	110	22	25	66764	13	529	386
Etsla-Cybertruck Tri Motor		3	2018	930000	Petrol	Manual	93	30	34	14500	4	787	527

CARS\_DATASET (99 rows)

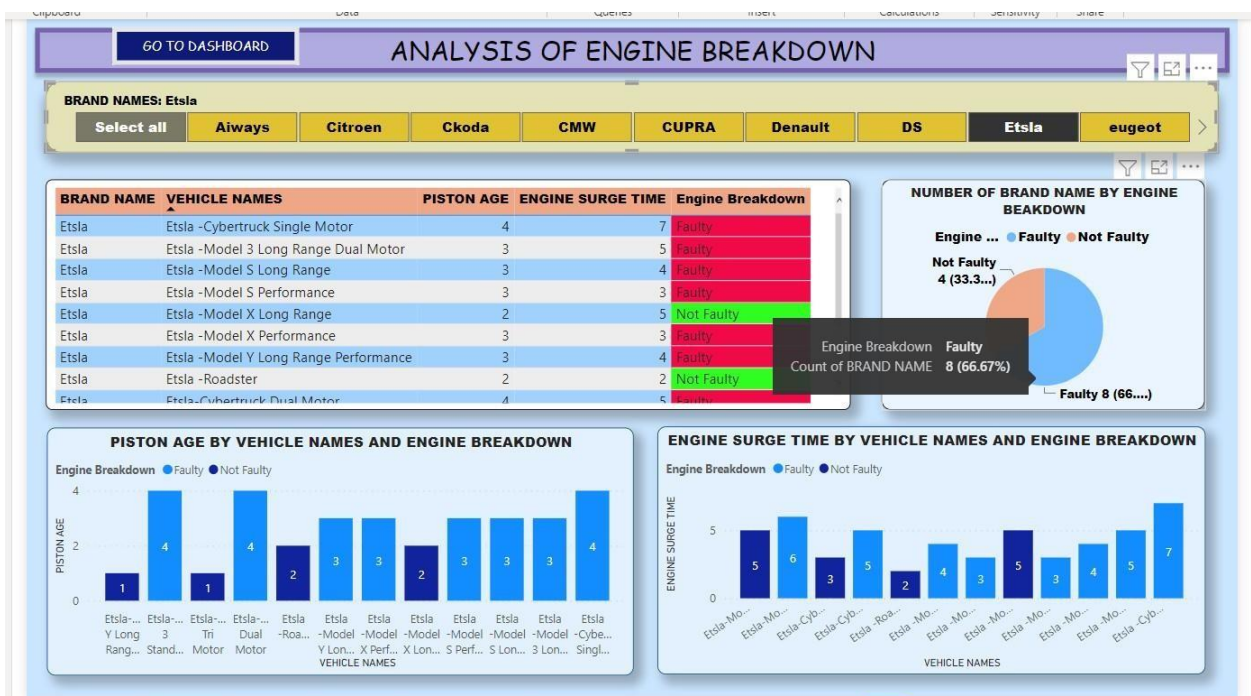
## 4.1 Results

After applying filters and creating perimeters on dataset the result in form of data visualization are:

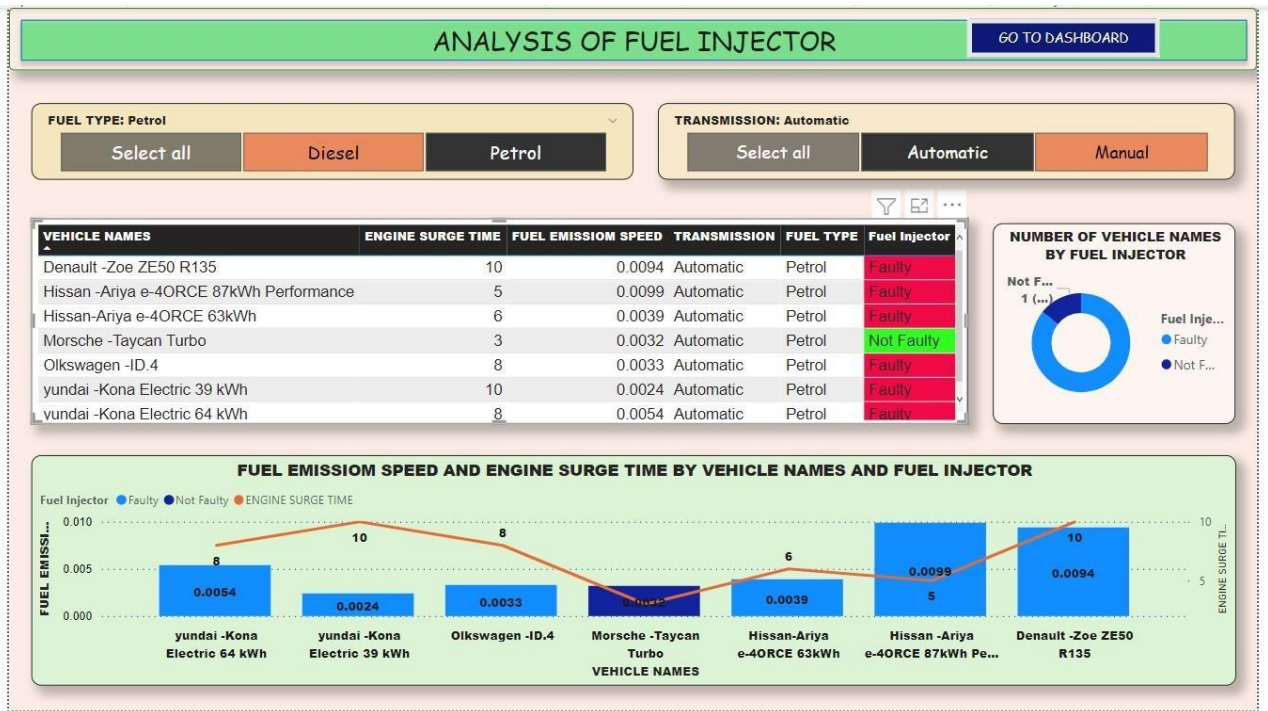
### Report 1 (Carbon filters):



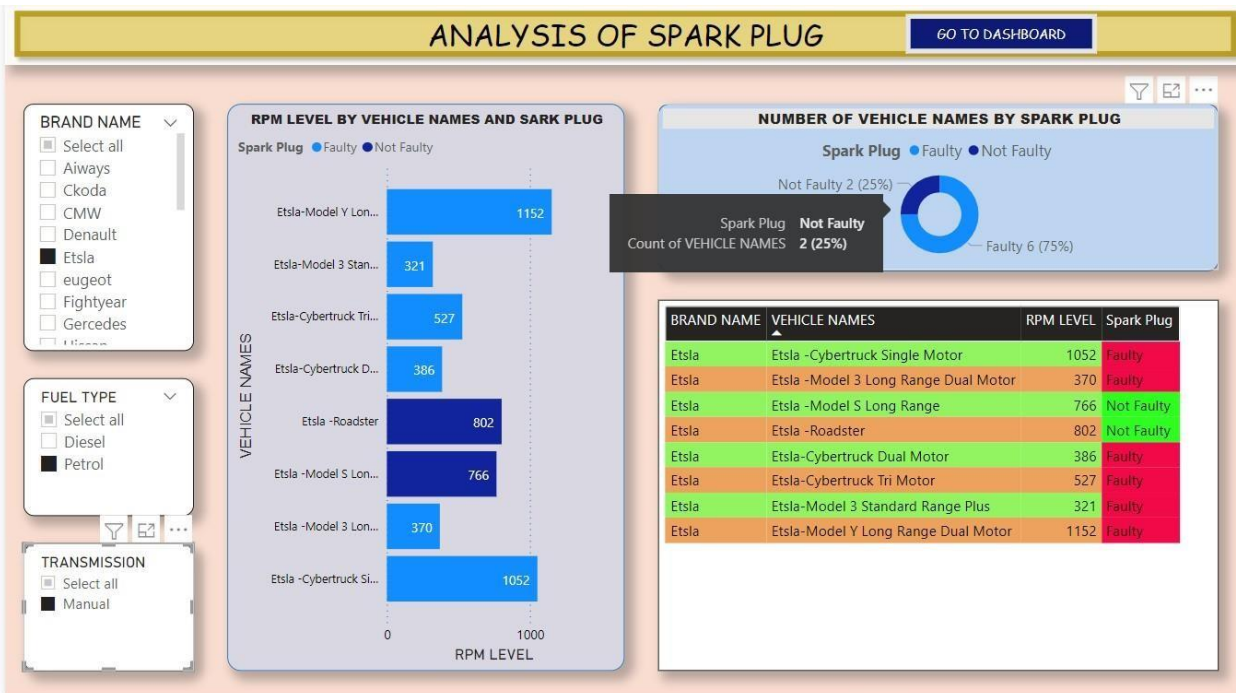
### Report 2 (Engine Breakdown):



### Report 3 (Fuel Injector):



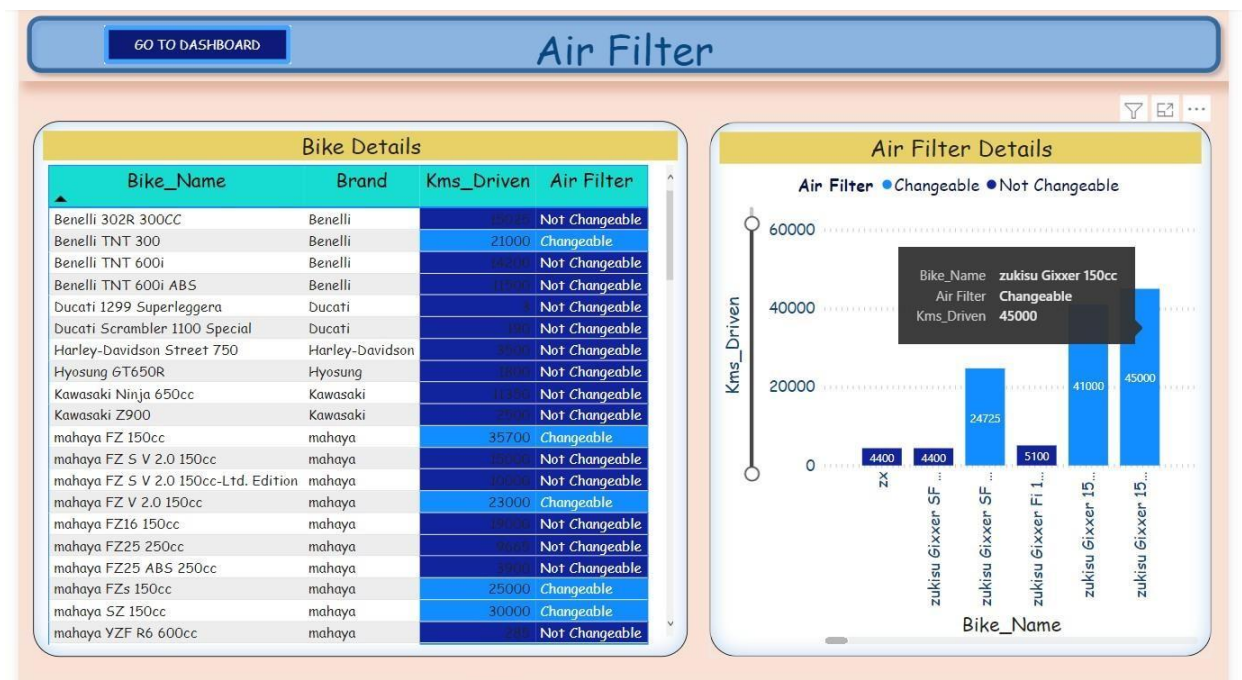
### Report 4 (Spark Plug):



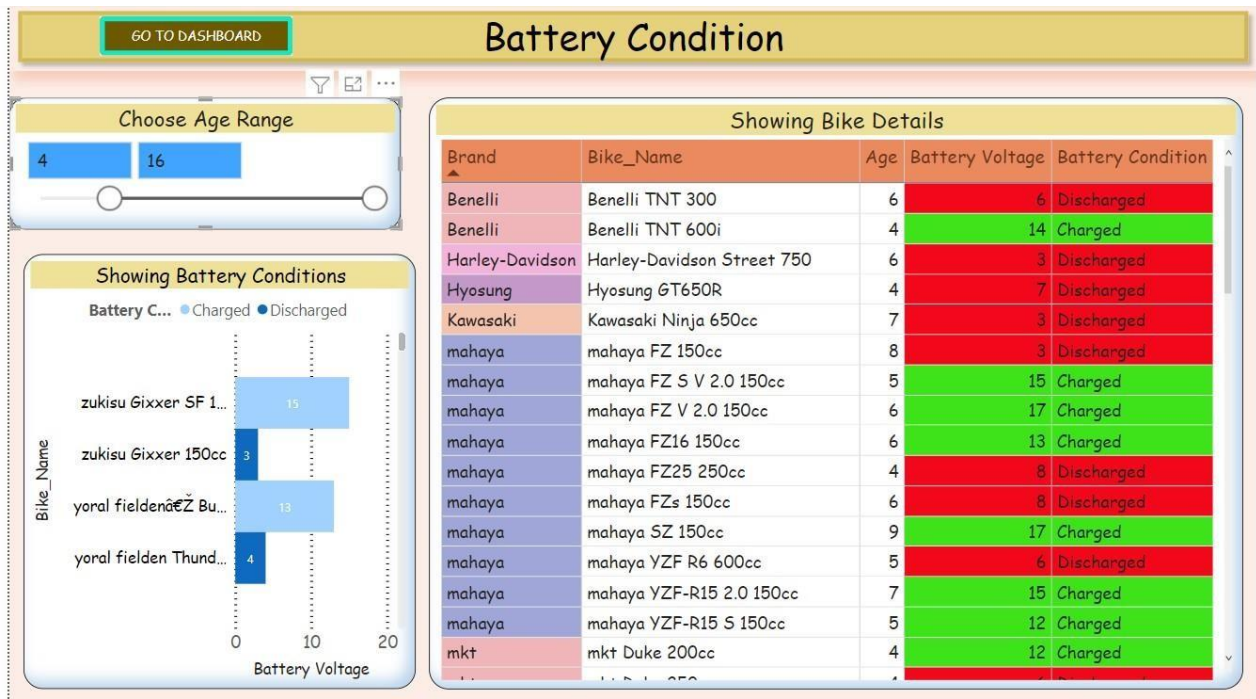
## Dashboard 1 (Two wheeler Dashboard):



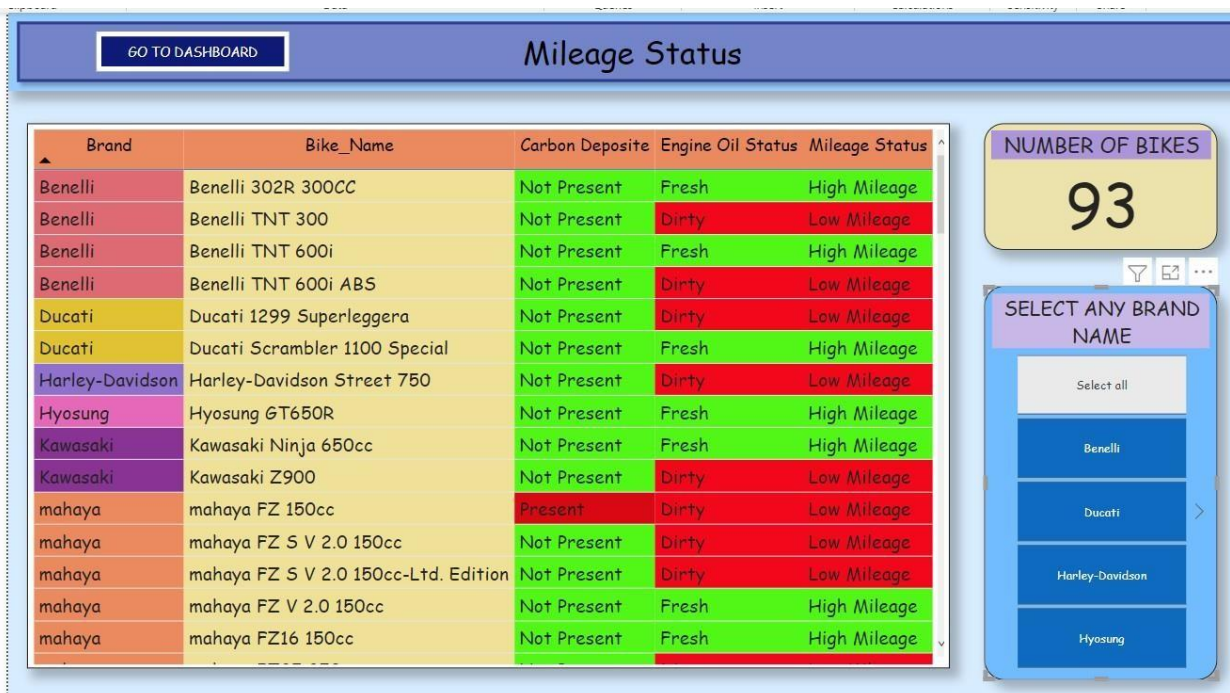
## Report 5 (Air Filter):



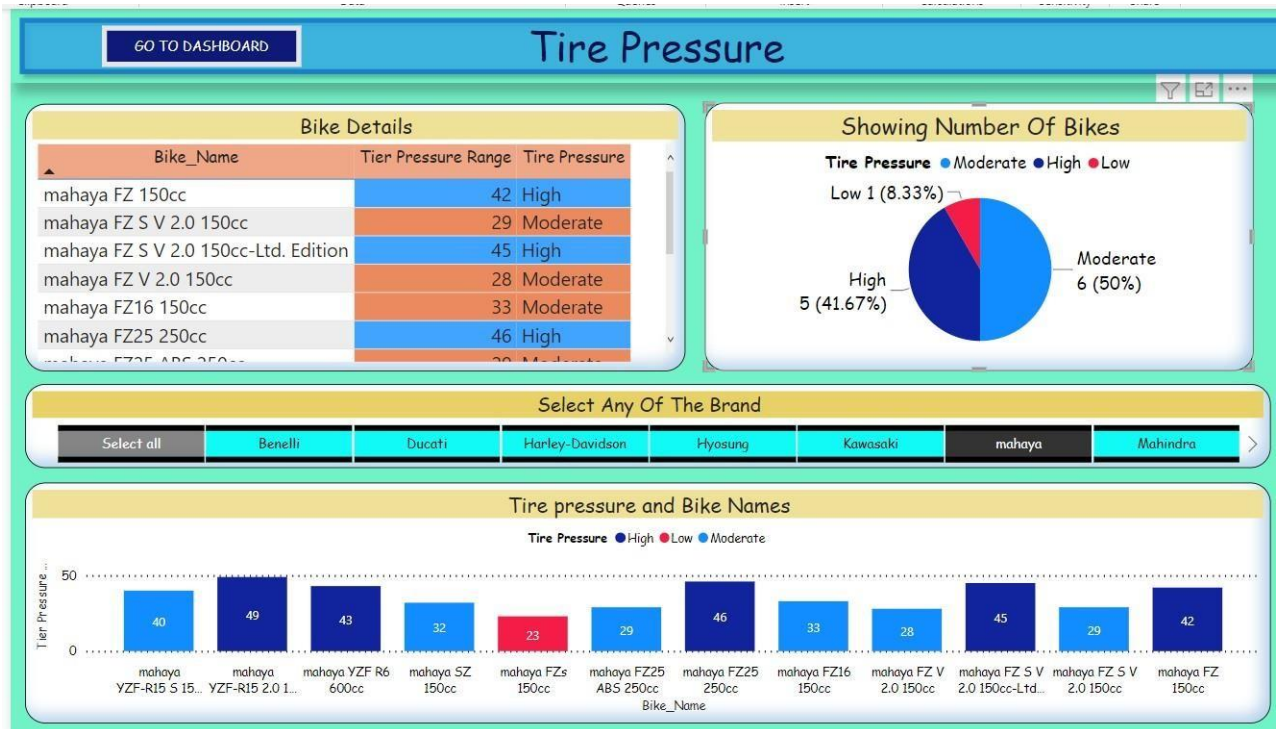
## Report 6 (Battery Condition):



## Report 7(Mileage Status):



## Report 8 (Tier Pressure):



## Dashboard 2 (Car dashboard):



## **4.2 Problems faced:**

- Sometime faces the issue of data loss due to VM maintenance.
- Problem in data cleaning.
- Difficulty in conditional formatting of tables due to many perimeters.

## **4.3 Limitations:**

- Unable to access different software except the ones provided by the company.
- Not able to download the files sent through outlook in the working hours.
- Cannot use or access the resources other than provided by the company.
- Cannot use the copyright data files or sources so we have to create everything manually.

## **4.4 Conclusion:**

Through my internship at Infosys, I was able to understand and get a better idea of various aspects of BI influencing the standard of business related decision making directly or indirectly. I also get to learn how BI is proven beneficial to many enterprises/organization by enhancing reporting and analysis via providing fast and better decision making.

To be successful, implacable contribution and determination of the organization's BI is very much needed or required. To compete world wide as well as locally in unfavourable circumstances the BI manager's work has become even more tough in today's dynamic business environment.

Overall, I have taken the business Intelligence internship experience to be positive, and I am sure enough I will be able to use this as one of my strong skills in my career later on and create many more better projects.

#### 4.5 List of References:

- - IBM Analytics
- <https://www.datapine.com/blog/data-warehousing-and-business-intelligence-architecture/>
- Infosys global application *LEX* for Education and Training purposes

URL: <https://lex.infosysapps.com>

- <https://docs.microsoft.com/en-us/sql/ssms/sql-server-management-studio-ssms?view=sql-server-ver16>

*Note: As per the Infosys Private Limited, Mysore's privacy policies, Industrial mentor cannot give signature on FPR reports and FPR has been provided on monthly bases.*

## FPR Report for January Month

### FORMAT

#### FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	NEERAJ GOPAL VERMA		Department	System Engineer Trainee	
Industry/Organization	INFOSYS LTD.		Date/Duration	Jan-2022 to April-2022	
<b>Criterion</b>	<u>Poor</u>	<u>Average</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>
Punctuality/Timely completion of assigned work			Good		
Learning capacity/Knowledge upgradation			Good		
Performance/Quality of work			Good		
<u>Behaviour/</u> Discipline/Team work			Good		
Sincerity/Hard work			Good		
Comment on nature of work done/Area/Topic	The intern is attending the training session <u>everyday</u> and doing works regularly.				
<b>OVERALL GRADE (Any one)</b>	<u>GOOD</u>				
<b>Name of Industry Mentor</b>	<u>Rajan Kushwaha</u>				
<b>Signature of Industry Mentor</b>	NIL				

Receiving Date	Jan-2022	Name of Faculty Mentor	<u>Prof. Abhilash Sonker</u>	Sign	NIL
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## FPR Report for February Month

### FORMAT

#### FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR



Name of student	NEERAJ GOPAL VERMA		Department	System Engineer Trainee	
Industry/Organization	INFOSYS LTD.		Date/Duration	Jan-2022 to April-2022	
<b>Criterion</b>	<u>Poor</u>	<u>Average</u>	<u>Good</u>	<u>Very Good</u>	<u>Excellent</u>
Punctuality/Timely completion of assigned work			Good		
Learning capacity/ <u>Knowledge upgradation</u>			Good		
Performance/Quality of work			Good		
<u>Behaviour/</u> Discipline/Team work			Good		
Sincerity/Hard work			Good		
Comment on nature of work done/Area/Topic	The intern is attending the training session <u>everyday</u> and doing works regularly. Qualified FA1 exam also.				
<u>OVERALL GRADE (Any one)</u>	<u>GOOD</u>				
<u>Name of Industry Mentor</u>	<u>Rajan Kushwaha</u>				
<u>Signature of Industry Mentor</u>	NIL				

Receiving Date	Jan-2022	Name of Faculty Mentor	Prof. <u>Abhilash Sonker</u>	Sign	NIL
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## FPR Report for March Month

### FORMAT

#### **FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR**

Name of student	NEERAJ GOPAL VERMA		Department	System Engineer Trainee	
Industry/Organization	INFOSYS LTD.		Date/Duration	Jan-2022 to April-2022	
<b>Criterion</b>	<b><u>Poor</u></b>	<b><u>Average</u></b>	<b><u>Good</u></b>	<b><u>Very Good</u></b>	<b><u>Excellent</u></b>
Punctuality/Timely completion of assigned work			Good		
Learning capacity/Knowledge upgradation			Good		
Performance/Quality of work			Good		
<u>Behaviour/</u> Discipline/Team work			Good		
Sincerity/Hard work			Good		
Comment on nature of work done/Area/Topic	<p>The intern is attending the training session <u>everyday</u> and doing works regularly.                      Qualified FA1 exam also.</p> <p>Intern is allocated to project <i>Vehicle Fault Analysis System</i></p>				
<b><u>OVERALL GRADE (Any one)</u></b>	<b><u>GOOD</u></b>				
<b><u>Name of Industry Mentor</u></b>	<u>Rajan Kushwaha</u>				
<b><u>Signature of Industry Mentor</u></b>	NIL				



Receiving Date	Jan-2022	Name of Faculty Mentor	Prof. <u>Abhilash Sonker</u>	Sign	NIL
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FPR Report for April Month

**FORMAT**

**FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR**

Name of student	NEERAJ GOPAL VERMA		Department	System Engineer Trainee	
Industry/Organization	INFOSYS LTD.		Date/Duration	Jan-2022 to April-2022	
<b>Criterion</b>	<b><u>Poor</u></b>	<b><u>Average</u></b>	<b><u>Good</u></b>	<b><u>Very Good</u></b>	<b><u>Excellent</u></b>
Punctuality/Timely completion of assigned work			Good		
Learning capacity/Knowledge upgradation			Good		
Performance/Quality of work			Good		
<u>Behaviour/</u> Discipline/Team work			Good		
Sincerity/Hard work			Good		
Comment on nature of work done/Area/Topic	Allocated project <i>Vehicle Fault Analysis System</i> has been completed.				
<b><u>OVERALL GRADE (Any one)</u></b>	<b><u>GOOD</u></b>				
<b><u>Name of Industry Mentor</u></b>	<u>Rajan Kushwaha</u>				
<b><u>Signature of Industry Mentor</u></b>	NIL				

Receiving Date	Jan-2022	Name of Faculty Mentor	Prof. <u>Abhilash Sonker</u>	Sign	NIL
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CERTIFICATE OF COMPLETION  
OF  
INTERNSHIP

This is to certify that

NEERAJ GOPAL VERMA

Of

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE,  
GWALIOR, Rajiv Gandhi Proudyogiki Vishwavidyalaya

has completed the internship program at Infosys Limited

from

January 2022 – April 2022

*Satheesha B. N.*

Satheesha B Nanjappa

Vice President and Head, Global Education Center

## APPENDIX – ROLE OF MENTORS

I am very grateful for my institute mentor who helped me throughout my internship period. Whenever I was in any kind of trouble, he were always there to help me. They were in continuous contact with me and helped me to successfully complete my internship.



**Prof. Abhilash Sonker**

Assistant Professor

Information Technology



NEERAJ CHOPAL VERMA  
09012T181038

PAPER NAME

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AUTHOR

ng v

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2843 Words

CHARACTER COUNT

29164 Characters

PAGE COUNT

30 Pages

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REPORT DATE

May 31, 2022 4:47 PM GMT+5:30

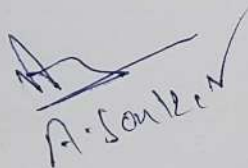
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A. Soukew

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<b>3</b>	<b>docs.microsoft.com</b> Internet	<b>2%</b>
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<b>7</b>	<b>sanmin.com.tw</b> Internet	<b>&lt;1%</b>
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*A*  
*A-soulcey*