

Expert Lecture (Session: - 2021-22)

Topic: - “Machine learning model for the Road Accidents”

Date: - 04-02-2022 (11:30 am - 12:30 pm)

Resource Person: - Dr. Sumit Srivastava, Professor, Manipal University, Jaipur & Senior Member, IEEE Delhi Section

Dr. Sumit Srivastava gave his presentation on “Machine learning model for the Road Accidents”. His main discussion points were:

- Sir has talked about the multidisciplinary domains about Machine Learning Model, Detection and security.
- Sir has discussed how a Machine Learning model was built to predict Accident Probability.
- Sir has also talked about some new concepts like Road accidents and analysis of road crashes.
- Sir has discussed that Road accidents are the leading cause of death, killing 1.3 million people yearly.
- Sir has discussed how his model was built for the Road accidents and analysis of road crashes was shown for jaipur as well as Rajasthan.
- At the end a very healthy question answer session also took place. Different questions were asked by the participants related to various applications of Machine Learning.
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The screenshot shows a Google Meet interface. The main window displays a presentation slide from Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur, featuring the ICETCE logo. The slide is titled 'INTRODUCTION' and discusses road traffic crashes as a leading cause of death. It includes two tables: one showing the leading causes of death by age group and another showing road accident statistics from 2010 to 2019.

Table 1: Leading Causes of Death (All Ages) in 2019

Rank	Cause	Age of Total Deaths
1	Ischaemic Heart Disease	16.6
2	Stroke	10.2
3	Chronic Obstructive Pulmonary Disease	5.4
4	Lower Respiratory Infections	5.2
5	Alzheimer's Disease and Other Dementias	3.5
6	Trachea, Bronchus, Lung Cancers	3.0
7	Diabetes Mellitus	2.8
8	Road Traffic Injuries	2.5
9	Diarrhoeal Diseases	2.4
10	Tuberculosis	2.3

Table 2: Road Accidents in India (2010 - 2019)

Year	Accidents	Killed	Injured
2010	499628	134513	527512
2011	497686	142485	511394
2012	490383	138258	509667
2013	486476	137572	494893
2014	489400	139671	493474
2015	501423	146133	500279
2016	480652	150785	494624
2017	464910	147913	470975
2018	467044	151417	469418
2019	449002	151113	451361

The presentation also includes a grid of participants: Sumit Srivastava, Dr. Meenakshi Nawal, Dr. Nilam Choudhary, bhagyashree choug..., babita dhanwal, Megha Chhabra, Dr. Pankaj Dadheech, and You. The bottom of the screen shows the Windows taskbar with the time 10:37 AM on 04-02-2022.

Sumit Srivastava is presenting

SKIT Institute of Technology, Management & Gramothan, Jaipur

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ROAD CRASHES IN RAJASTHAN WITH DETAILED ANALYSIS OF JAIPUR DISTRICT

Rank	State	% Share	Killed
1	Uttar Pradesh	15.0	22655
2	Maharashtra	8.5	12788
3	Madhya Pradesh	7.4	11249
4	Karnataka	7.3	10958
5	Rajasthan	7.0	10563
6	Tamil Nadu	7.0	10525
7	Andhra Pradesh	5.3	7984
8	Gujarat	4.9	7390
9	Bihar	4.8	7205
10	Telangana	4.6	6964

Table 4 Percentage Share of Fatalities During Year 2019. Source: Transport Department, Rajasthan

Fig. Road Accidents and Injuries in Rajasthan (2015 - 2019) Source: Transport Department

Fig. Persons Killed in Road Accidents in Rajasthan (2015-2019) Source: Transport Department

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SKIT Institute of Technology, Management & Gramothan, Jaipur

ICETCE

Analysis of Road Crashes in Jaipur District

Year	Accidents	Killed	Injured	Deadly %
2015	4288	1416	3925	33.72
2016	4190	1406	3900	33.56
2017	4028	1333	3593	33.13
2018	3912	1271	3344	32.49
2019	4269	1283	3581	30.05
Difference	+357	+12	+237	-2.44
Change %	+9.13%	+0.84%	+7.09%	-7.31%

Table Accidents, Deaths and Injured as Per Road Category in Jaipur (2018). Source: Transport Department

S. N.	Zone	Accidents	Killed	Injured
1	East	964	182	739
2	West	944	283	779
3	North	237	52	208
4	South	636	175	539
5	Rural	1131	579	1079
TOTAL		3912	1271	3344

Table Accidents, Deaths and Injured at Various Junctions in Jaipur (2018). Source: Transport Department

Road Category	Accidents	Killed	Injured
Expressway	0	0	0
National Highway	1228	606	1133
State Highway	323	157	290
Other Road	2361	508	1921
TOTAL	3912	1271	3344

Table Road Users Killed in Different Zones of Jaipur District (2018). Source: Transport Department

Road Users	Killed	Injured
Pedestrians	86	52
Bicycle	0	0
2 Wheeler	57	58
Auto	8	4
Car	40	28
Truck	13	4
Bus	10	0
Others	33	131
TOTAL	182	283

Table Road Users Killed in Different Zones of Jaipur District (2018). Source: Transport Department

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Sunit Srivastava is presenting

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DATA SOURCES FOR ANALYSING ROAD CRASHES

Cause	Accidents	Killed	Injured
Overspeed	3695	1215	3162
Drunken Driving	68	11	43
Wrong Side Driving	142	41	135
Red Light Jump	1	0	0
Using Mobile	6	4	4
TOTAL	3912	1271	3344

Table Accidents, Deaths, and Injured According to Cause in Jaipur (2018).
Source: Transport Department

Fig. Percentage Share of Deaths According to Cause of Accident in Jaipur (2018)

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Sumit Srivastava

Dr. Meenakshi Nawal

Dr. Nilam Choudhary

bhagyashree choug...

babita dhanwal

Diwakar Sharma

Dr.Rajasanthosh ku...

3 others

You

10:46 AM | hjw-trcc-ofg

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