

2.2 Comparative study(Of Different Papers by using Table)-

S. No.	Title	Author	Publication	Methodology	Year
1.	Deep-Learning Method to Predicting Traffic Accidents Due to Drowse	Shivam Singh, Shreya Bansal, Anjum Parvez	2022 International Conference on Cyber Resilience (ICCR),	<ul style="list-style-type: none">• Data Preprocessing• Feature Engineering• Hyperparameter Tuning	2022
2.	Prevention from Road Accidents by Detecting Driver Drowsiness	S Priyadarshini	Recent Trends in Information Technology and its Application 5 (2),	<ul style="list-style-type: none">• Perform data cleaning to remove noise, outliers, and artifacts.• Annotation and Labeling• Continuous Monitoring and Feedback	2022
3.	Development of a Driver Safety Monitoring Device with Ignition Interlock.	Joseph Kayode, Kevin J Agim, Omolayo M Ikumapayi, Adeyinka OM Adeoye	International Journal of Safety & Security Engineering 12 (6),	<ul style="list-style-type: none">• Requirements Analysis• Build prototypes for field testing	2022
4.	Arduino based real time drowsiness and fatigue detection for bikers using helmet	M Oviyaa, P Renvitha, R Swathika, I Joe Louis Paul, S Sasirekha	2nd International Conference on Innovative Mechanisms for Industry Applications (ICIMIA)	<ul style="list-style-type: none">• Choose appropriate sensors (e.g., cameras, alcohol sensors)• Monitoring and Maintenance	2022

5.	Real time 'driver drowsiness' & monitoring & detection techniques	Divyanshu Tyagi, Drishti Sharma, Rishabh Singh, Kaushal Kishor	International journal of Innovative Technology And Exploring Engineering	<ul style="list-style-type: none"> Real Time Data Processing Alert Mechanism Integration and Vehicle System 	2022
6.	Mobile Application on Drowsiness Detection When Driving Car	Akshat Singhal, Sunil Kumar	VLSI, Microwave and Wireless Technologies: Select Proceedings of ICVMWT	<ul style="list-style-type: none"> Identify the target audience and their specific needs Drowsiness Detection Algorithm Development 	2022
7.	Driver drowsiness detection and tracking based on YOLO with Haar cascades and ERNN	Belmekki Ghizlene Amira, Mekkakia Maaza Zoulikha, Pomares Hector	International Journal of Safety and Security Engineering	<ul style="list-style-type: none"> Train a YOLO model on the dataset to detect objects. Design an alert system that can notify the driver in case of detected drowsiness. 	2021
8.	Driver drowsiness monitoring system using visual behavior and machine learning	M.Aishwarya, Sampuram Salini, P.Deepthi, V. Anantha Krishna	International journal of creative research thoughts	<ul style="list-style-type: none"> Legal and Ethical Considerations Testing and Validation in Real-World Scenarios 	2021
9.	Research on a real-time driver fatigue detection algorithm based on facial video sequences	Tianjun Zhu, Chuang Zhang, Tunlung Wu, Zhuang Ouyang, Houzhi Li, Xiaoxiang Na, Jianguo Liang, Weihao Li	International journal of Applied Science	<ul style="list-style-type: none"> Model Training and Validation Comparison with Existing Methods 	2021

10.	IoT-based smart alert system for drowsy driver detection	Anil Kumar Biswal, Debabrata Singh, Pattanayak, Debabrata Samanta, Ming-Hour Yang	Wireless communications and mobile computing	<ul style="list-style-type: none"> Testing in Controlled Environments Legal and Ethical Considerations 	2021
11	Drowsy driver detection using eye-tracking through machine learning	S Akshay, MB Abhishek, Sudhanshu, C Anuvaishnav	Second International Conference on Electronics and Sustainable Communication Systems (ICESC),	<ul style="list-style-type: none"> Peer Review and Publication Testing and Validation in Controlled Environments 	2021
12	Smart driver monitoring system.	Shubhi Shaily, Srikanth Krishnan, Saisriram Natarajan, Sasikumar Periyasamy	Multimedia Tools and Applications.	<ul style="list-style-type: none"> Selecting Sensors and Hardware Implement a system for remote monitoring and reporting 	2021
13	Application of IoT and Machine Learning for Real-time Driver Monitoring and Assisting Device	Pranay Sharma, Naveksha Sood	11th International Conference on Computing, Communication and Networking Technologies (ICCCNT)	<ul style="list-style-type: none"> Integrate sensors into the vehicle's interior Extract relevant features from the collected data 	2020
14	Deep Learning based Drowsiness Detection and Monitoring using Behavioral Approach	P William, Mohd Shamim, Ajay Reddy Yeruva, Durgaprasad Gangodkar, Swati Vashisht, Amarendranath Choudhury	2nd International Conference on Technological Advancements in Computational Sciences (ICTACS)	<ul style="list-style-type: none"> Split the dataset into training, validation, and test sets Document the research methodology, algorithm design, experiments, and results. 	2022

15.	Low-cost real-time driver drowsiness detection based on convergence of images and signals	Kwang-Ju Kim, Kil-Taek Lim, Jangwoon Baek, Miyoung Shin	international conference on artificial intelligence in information and communication (ICAIIIC),	<ul style="list-style-type: none"> Gather data from the integrated sensors in real-time. Ensure compliance with legal and privacy regulations. 	2021
16	Real Time Eye Monitoring System Using CNN for Drowsiness and Attentiveness System	Rahul Pai, Avinash Dubey, Nikhita Mangaonkar	Asian Conference on Innovation in Technology (ASIANCON),	<ul style="list-style-type: none"> Design and implement the CNN model for analyzing the eye images working with sensitive data like eye images. 	2021
17	Deep learning based approach for real-time driver drowsiness detection	Amit Raha Niloy, Nusrat Sharmin	5th International Conference on Electrical Engineering and Information Communication Technology (ICEEICT),	<ul style="list-style-type: none"> Split the dataset into training, validation, and test sets Implement a mechanism to process incoming facial data in real-time. 	2021
18	Real-time detection for drowsy driving via acoustic sensing on smartphones	Yadong Xie, Fan Li, Yue Wu, Song Yang, Yu Wang	IEEE Transactions on Mobile Computing	<ul style="list-style-type: none"> Lean and preprocess the audio data to remove noise. 	2020
19	Drowsy driver detection using eye-tracking through machine learning	S Akshay, MB Abhishek, D Sudhanshu, C Anuvaishnav	Second International Conference on Electronics and Sustainable Communication Systems	<ul style="list-style-type: none"> Split the dataset into training, validation, and test sets Comparison with Existing Methods 	2021
20	Real-time detection for drowsy driving via acoustic sensing on smartphones	Yadong Xie, Fan Li, Yue Wu, Song Yang, Yu Wang	IEEE Transactions on Mobile Computing	<ul style="list-style-type: none"> Implement a mechanism to process incoming audio data in real-time. Consider ethical implications, including privacy and data protection 	2020