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**Senior Design Project Proposal**

**Supervisor: FAIZ AL FAIAL**

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| **Project title :** |
| Road Transportation Real Time Detection |

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| **Project Aim :** |
| Road Transportation Real Time detection ( RTRTD ) system is mainly important for road safety and human safety purpose which is based on image processing and Arduino. Continuing advances in Machine Learning technologies promise to deliver more power for traffic signal and accident protection based query. Our mechanism is for machine based protection systems for traffic and also for road safety so that people can easily survive in all over in our country. On the other hand human security is main focus for our project. Hence it is important to find the safety security alert and also the notifications detection through text message, via mobile phone and image detection for traffic panels and also for vehicle safety purpose. In this research proposal, we like to introduce a new mechanism for road transportation systems that could reduce those problems (like- accident, vehicle track, speed track, collision warning, and etc.) and also like to measure the static and dynamic mechanism in images processing, microcontroller, Arduino, Rash berry pi both in software and hardware . |

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| **Project Background :** |
| Road Transportation Real Time detection ( RTRTD ) is the increased demand for next generation of road safety. Sequential traffic fails to protect the road safety and collision systems for people security we are adding this systems with machine based images processing and adding Artificial Intelligence mechanism. Hence the need for massively road transportation and real time detection systems is highly essential for our country. Massively Road transportation systems with real time detection systems with upgrade systems with upgrading technology for road transportation and real time detection systems.  One of the main constraints for RTRTD systems is updating mechanism that could be scaled up to millions of people to protect from accident. In The day to day life we see accidents and which has no proper records . Our system will help authority to collect all the background from the accidents. A real time vehicle detection of number plate system has been planned which will help the system to get information about any vehicle and analyze it .  A 360 degree collision sensor will be implemented to sense the accident from all the side of a car and alert it to the rider.  A lot of system has been proposed regarding road safety but our system will control traffic too. We have a system where the traffic signals will be displayed in form of laser light where a time interval will be set to control traffic of all side. |

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| **Project Plan :** |
| 1. **MAY - JUNE 2020**   **Web Development:**  For project basis we are making the website or apps for information storage and for portfolio details  Where anyone can get the database details information and hardware project concepts with following mechanism. Image processing for number plate detection and real time speed detection systems different routine for different roles for project with microcontroller, raspberry pi, and also about Arduino which is for laser traffic light, collision warning systems, speed real time detection through hardware will get the details connectivity and process systems through website information.  **LASER DISPLAY OF TRAFFIC LIGHTS:** We use laser light with microcontroller maintenance, Rashberry pi, Ardiuno for collision warning and number plate detection so that driver or any kinds of awkward situation it will helps us with proper signal and also we will add it with mobile alert systems so that police or accidental research can easily get their verifications sms, from accident. |