**Project Proposal**

**Real-Time Surveillance using Object Detection**

**Language :** Python

**Description:** Our team is planning to build a python based software which identifies fatigue in the driver that functions in a way where the opening and closing of eyes or blink rate determine whether the driver is drowsy. Another factor which is the yawn rate determines if the individual is drowsy and when these features are captured an alarm is set off to alert the driver to prevent fatal accidents. According to FMCA (Federal Motor Carrier Safety Administration) in the USA it is said that Fatigue is the major factor to cause accidents where fatigue shows about [64%](https://www.witpress.com/Secure/elibrary/papers/UT95/UT95050FU.pdf) of truck drivers experience some kind of fatigue regularly. Earlier studies indicate that drowsy driving could be involved in upwards of [40%](https://www.ntsb.gov/safety/safety-studies/Documents/SS9501.pdf) of truck crashes and about [50%](https://www.witpress.com/Secure/elibrary/papers/UT95/UT95050FU.pdf) of accidents involving driver fatigue take place between midnight and 8 am. By applying our computer vision algorithm with the help of OpenCV we can clearly detect whether the person is drowsy or awake. If the driver is fatigued then an alarm is set off to wake the driver up.