



**Ahmedabad  
University**

**CSE523 - Machine Learning**

**Project 11: Identify abnormal driving behavior using  
spatio-temporal analysis**

**Weekly Report 1**

**Group: Titans**

**Team Members**

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## **Week one: Group formation and understanding of problem statements.**

In our group formation phase, we gathered individuals with diverse skill sets relevant to the problem at hand. The goal is to ensure a comprehensive team capable of tackling the multidimensional aspects of identifying abnormal driving behavior through spatio-temporal analysis.

Understanding the problem statement involves breaking it down into its key components:

**Abnormal Driving Behavior:** This encompasses a range of actions or patterns that deviate from normal driving behavior. It might include sudden acceleration or deceleration, erratic lane changes, excessive speeding, frequent stops, or any other behavior that could indicate risky driving.

**Spatio-Temporal Analysis:** This refers to analyzing data with respect to both space (location) and time. In the context of driving behavior, it involves examining where and when certain behaviors occur. For example, identifying hotspots where accidents or risky behaviors are more likely to happen, or detecting patterns of behavior over time, such as increased risk during certain hours of the day or days of the week.

Additionally, we outlined the specific objectives and constraints of the project, such as the types of data available (e.g., GPS data from vehicles, accelerometer data, traffic camera footage), any legal or ethical considerations (e.g., privacy concerns with collecting and analyzing driver data), and the intended outcomes (e.g., developing a predictive model to alert drivers or authorities to potential risky behavior).

Once everyone is aligned on the problem statement and objectives, we move on to defining a more detailed project plan, including data collection, analysis methods, model development, and evaluation metrics. Collaboration and communication within the group are key throughout this process to ensure everyone remains on the same page and can contribute their expertise effectively.