**CSE616-S21: Project Proposal   
  
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**Design and Implementation of AI security scheme for connected vehicles**

**Introduction**

Autonomous vehicles security is essential for continuous development of safer roads, where vehicles exchange safety messages to prevent collision.

Basic Safety Messages are the key for vehicles’ communication with each other or with Infrastructure.

**Problem Definition**

Since communication of Vehicle to vehicle or Vehicle to Infrastructure is done wirelessly this gives a chance of vulnerability and intrusion.

Here comes the importance of learning algorithms to learn and then differentiate the real safety message and attacker message.

**Project Goal**

Develop a model that should be trained to distinguish attacker messages from real messages using Deep learning method.

**Project Plan**

Survey on the available datasets

Survey on suitable Deep learning methods

Design and Implement One Deep Learning method to distinguish attacker messages that are sent to ego vehicle

**References**

*[1] J. Kamel and M. R. Ansari and J. Petit and A. Kaiser and I. Ben Jemaa and P. Urien, Simulation Framework for Misbehavior Detection in Vehicular Networks, IEEE Transactions on Vehicular Technology,2020*