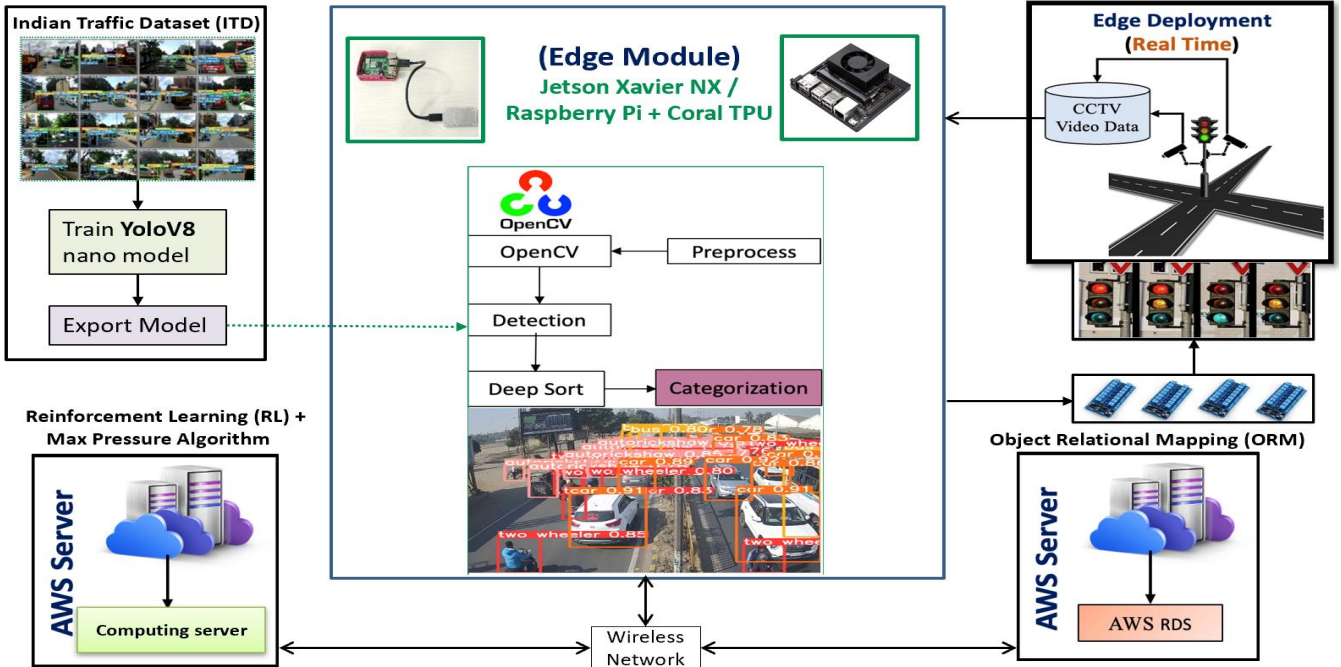# INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

AdaptiSync: AI-based Real-Time Adaptive Traffic Control using Edge-Computing

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- The product that can be installed at a **new signalized intersection** or can be integrated with an **existing traffic intersection**.
- It works in real-time and supports multiple vehicle classes using the **Indian Traffic Dataset (ITD)**.
- It is a **wireless and portable** product, which makes the **installation quick** and has little to **no interruption to traffic** and **damage to the pavements**.
- It is based on **edge computing**, i.e., configured **AI-based algorithms** for vehicle identification, classification, and counting to support traffic conditions in India.
- The architecture is designed to **support different single-board computers** (SBCs) for **long-term compatibility**.
- It is integrated with **cloud computing** for **data storage** and signal timing computation using **Max Pressure Control and Reinforcement Learning** (RL) algorithms.
- The product is **economical, scalable, transferable, and suitable** under the **Smart City Mission by the Govt of India**.