# Walmart Hackathon

1.  **Team Details:** Team 59
    Team Captain - Aarushi Chopkar
    Team Members - Smridhi Dhingra, Pratiksha Kothawade

2.  **Theme Chosen**: Machine Learning-based fraud detection system.

3.  **Brief abstract of the idea and how it is aligned with the chosen theme:**

    **FraudSmart** - Smartly Guarding E-Commerce Advertisements from Fraud

Pay-per-click (PPC) model which takes payment based on the number of clicks on online advertisements, often opens the door for fraudulent activity, known as "click fraud". Here the advertisements are clicked on with malicious or vindictive intent to increase publishers' revenues or drain the advertisers' marketing budget without any interest in the advertisements. Click fraud affects all forms of paid programmatic advertising, including Walmart's paid ads displayed in Apps/Websites.
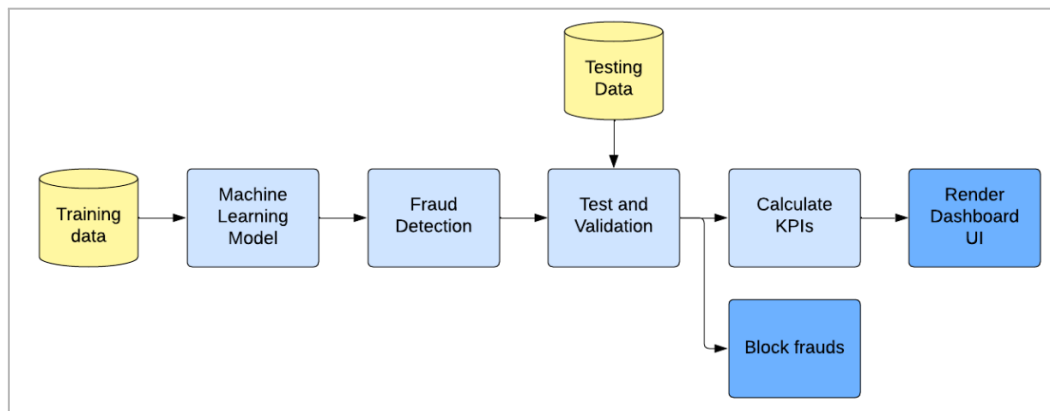
**"FraudSmart"** is an Ad fraud detection model leveraging advanced supervised and unsupervised machine learning techniques. This model enhances the integrity of online campaigns.

By analyzing user behavior logs, campaign performance metrics, and device information, it identifies patterns of fraudulent ad interactions. This Machine learning model ensures continuous learning and adaptation. The model's fraud detection mechanism minimizes false positives, optimizing resource allocation. Rigorous testing and validation ensure precision, recall, and overall performance.

It also intends to provide insights to the advertiser about their ad campaigns to analyze key metrics and make better and informed decisions. Machine Learning will save the global ad market over $10 billion that would otherwise go into fraudsters' pockets.

**Technologies used** - Python, Tableau, React/UI tools.

4.  **High level Architecture:**



5.  **Implementation plan:**