**Ad Optimization in Website using Reinforcement Learning**

**ABSTRACT**

This is a machine learning project used to find the best, clickprone ad among a set of ads by exploitation instead of exploration. The process of posting an ad into a website costs money. If you have a number of ads of the same product and need to find out which ad is the best among them, in terms of the number of clicks it attracts, you either have to post all the ads simultaneously, which is a very expensive approach, or will have to use a statistical method. Here, we use RL to find the best among the lot, by posting the least number of ads in a website one by one, which are then given to the visiting users, whose clicks are monitored. The project runs in parallel to the website and monitors user clicks on ads to find the best one which can later be posted permanently on the webpage.