**Project Proposal: Model-Independent Online Learning for Influence Maximization**

**Group Members:**

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**Problem:**

The problem of maximizing the number of users that become aware of a product by selecting a set of “seed” users to expose the product to. So consider the case of a new marketer looking to exploit an existing social network, while simultaneously learning the factors governing information propagation.

**Previous Work:**

While prior work assumes that existing solutions to the IM problem require as input, the underlying diffusion model which describes how information propagates through the network. The IM problem has been studied under various probabilistic diffusion models such as independent cascade (IC) and linear threshold (LT) models. Under these common models, there has been substantial work on developing efficient heuristics and approximation algorithms. We propose a model that not only assumes a known model of information diffusion, but is also statistically efficient to learn from data.

**Project Milestones:**

* Acquiring Data sets
* Data classification
* Data parsing: sorting of data
* Building of machine learning algorithm: finishing models
* Gather Results

**End Goal:**

The outcome of this project will be evaluated by how accurately a model can steer the activity of the network by not only robust to the underlying diffusion model, but can efficiently learn a statistically near-optimal solution.

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