Prediction algorithms in social media applications

About us:
Socialinsider is a social media analytics tool that offers simplified and straightforward analytics for busy marketers. We offer our clients the ability to compare performance across channels, get competitor analysis, benchmarks, and listening insights.

Introduction:
The objectives of the following projects can be addressed using similar methodologies. The first project focuses on discovering patterns in user activities within web applications to predict the likelihood of a user reaching a desired success event. The second one involves identifying correlations in social media performance metrics to predict future growth potential. Both projects require analyzing historical data to uncover trends and patterns that can be used to make accurate predictions.

I. **Development of a purchase prediction algorithm based on user properties and activities**.

Premise: Determining when a user testing the features of an application has discovered the desired value and is likely to make a purchase is a critical aspect that requires careful monitoring in order to provide a better experience and increase the conversion rate.

Goal: Knowing the basic characteristics of a web application user along with his activity log, the algorithm should predict how likely the user is to reach the desired success event.
The algorithm (or machine learning model) will use a dataset of user properties, his application activity log, the time the user spent in the application, and the desired success event. The output should be the probability of reaching the success event for any user outside the dataset.

Dataset: consists of anonymized Socialinsider user activity collected for our periodic application usage reports. Examples of basic dataset requirements for users: the geographic location, and email domain name. Examples of basic dataset requirements for the event log: timestamp, URL, and event name.
The dataset

II. Social media growth potential predictor

Premise: Marketing teams often have to argue and explain why the organic growth numbers of their social media profiles are not at the desired number. If a correlation between the current and historical performance metrics and the potential growth of their page can be found, then the argument can be settled.

Goal: Knowing the historical performance data of a social media profile (posts schedule, performance metrics, and profile metrics like followers), the algorithm should predict the follower count and average engagement rate of the page in the upcoming month / quarter / semester / year.

Dataset: Anonymized social media profile data from various platforms provided by Socialinsider, collected from platform APIs in order to provide reports for users. It consists of 2 components for each social media profile: *almost* daily followers count numbers for the last 12 months and posts history & performance data for the same calendar interval.

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