Secret Escapes

Data Science Assignment

Objective

The dataset contains several different interaction types per deal (product) along with the number of unique participants and deal properties.

Develop an algorithm to optimize for the conversion rate, defined as the number of bookings (field: *unique_visitors_bookings*) divided by the number of unique pageview visitors (field: *unique_visitors_deal_pageview*). Your algorithm should provide a ranking of *all* deals regardless of whether or not an actual order occurred.

Deliverables

Deliverables are working code (Python (Jupyter Notebook) or R preferred but any language is OK) and a short writeup on your algorithm and its performance. You will have up to a week to complete the assignment. However, we estimate that it should not take more than 8 hours in total to complete it.
You can use the following to guide your thoughts, although this is not a complete list:

- What sanity checks should you do before jumping into the analysis?
- What data cleaning and filtering steps are necessary?
- What you think is the biggest challenge in this problem?
- Which next steps would you take to improve the rank?
- How would you use this ranking to improve SecretEscapes business?

Dataset

In the dataset every row represents a particular deal - SecretEscapes product. At Secret Escapes deals are typically available online only for a limited amount of time.
Some notes about specific dataset fields:

- Sale_id: unique deal identifier
- Deal Start: deal activation date
- Deal End: deal deactivation date
- Has_tag_<X> - human added labels, where values are yes (=1) or no (=0) and indicate if the label is present or not
- Show_price: yes (=1) or no (=0)
- Unique_visitors_bookings: how many visitors booked a deal
- Unique_visitors_deal_pageview: how many visitors interacted with deal's page
- Unique_visitors_book_form: how many visitors interacted with deal's booking form

This is not a complete list as there are several other fields available in the dataset, you are free to use them if you need.