ANNOUNCEMENT

BACHELOR THESIS

KEYWORDS

- Data Analysis
- Python
- Machine Learning

TOPIC: ANALYZING THE WIN RATE OF A DIRECT BANKING CAMPAIGN IN REAL-TIME BIDDING

Since AT&T broadcasted the first display ad ever on hotwired.com, the display ad market became a multi-billion dollar business. Since then, user tracking, targeting, and measurement of ad effectiveness became a lot easier (The Trade Desk 2015). At the same time, a new technology called real-time bidding emerged enabling advertisers to buy single ad impressions in ad auctions (Lee et al. 2013). Those RTB auctions provide advertisers with rich data to analyze campaign success.

The aim of the thesis thus is to analyze the win rate (i.e., how often an advertiser wins the auction given their bids) of a direct banking RTB-campaign using auction data. The data set includes information on the time that the auction is held, the submitted bid, and whether the auction was won (since the data is confidential, it cannot be previewed). In order to reach this aim, the student is expected to conduct statistical analyses and provide visualizations of the data, and apply (a) linear models, (b) support vector machines, and (c) gradient boosting techniques. Supported by us, the student will need to make herself/himself familiar with the following Python packages: (a) numpy, (b) pandas, (c) statsmodel, (d) matplotlib and/or seaborn, and (e) scikit-learn.

LITERATURE & LINKS:

Lee, Kuang-Chih, Ali Jalali, and Ali Dasdan (2013), "Real Time Bid Optimization with Smooth Budget Delivery in Online Advertising," Proceedings of the 19th ACM Conference on Knowledge Discovery and Data Mining (KDD'13).

The Trade Desk (2015), "The Trade Desk Product Catalog, January 2015," (last accessed at Oct 2nd, 2020), [available at http://issuu.com/thetradedesk/docs/product_catalog_jan2015_123014].

SUPERVISOR:

- Uğurcan Dündar: https://www.wu.ac.at/en/imsm/about-us/team/ugurcan-duendar
- Prof. Dr. Nadia Abou Nabout: https://www.wu.ac.at/en/imsm/about-us/team/nadia-abou-nabout/

APPLICATIONS:

4/28/2021

Applications with CV and transcript of records should be sent to Uğurcan Dündar (ugurcan.duendar@wu.ac.at).