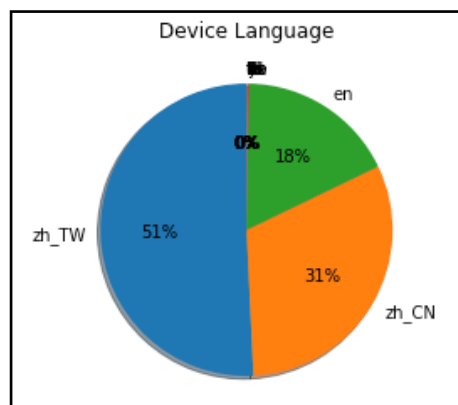
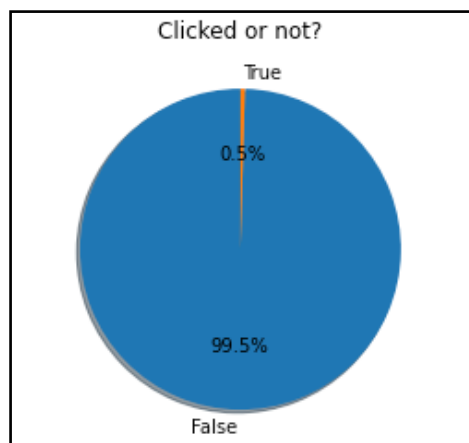


today.line.me	848751
hk.appledaily.com	265292
hk.on.cc	192478
www.hk01.com	113819
orientaldaily.on.cc	101971
www.dcfever.com	86808
www.jetsocclub.com	75080
dictionary.cambridge.org	66990
money18.on.cc	65713
www.ebay.com	53513
wmoov.com	46701
Name: webDomain, dtype: int64	

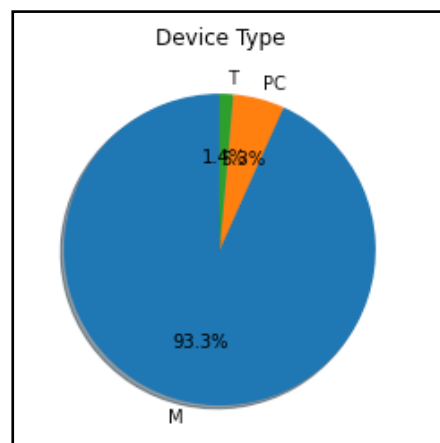
According to the list of webDomain, the top 10 web domain are mainly news website, including Line Today, apple daily and on.cc.



According to the bar chart of Device Language, the users who access the ad are mainly using Traditional Chinese(zh\_TW: 51% & zh\_CN: 31%).



With the pie chart of the click rate of the ad, most customer did not click into the ad.



Most user who saw the ad are using mobile phone as the device.

## Insights & suggestions:

For the insights, the data of techtest\_transactions and techtest\_footprint.gz has showed some of the pattern and habits of the users who saw the ad. According to the top 10 Web Domain record, most people who saw the ad are from news website e.g. Line Today, Apple Daily and On.cc, and top 5 of the Web domain are all news website. Besides, it is found that over 82% users are using Traditional Chinese (zh\_TW & zh\_CN) as the device language. However, only 0.5% users has clicked into the ad. And most users are using mobile phone when seeing the ad.

When it comes to the improvement, it is recommended that the ad design can be simple and informative. As most users would scroll over the ad instead of clicking into the ad, a simple and clean ad can left its mark to the users. The most attractive selling point / information can allow users to understand the product without clicking the ad.

For the suggestions on data enrichment / data acquisition, data cleaning is one of the important steps for data analysis. For example, we can delete the row with null value in 'webDomain' for file of transactions and combine with column of 'webDomain' in file of footprint, in order to enhance efficiency when accessing the tables.

## Suggestions for matching users:

Nowadays, the API is the core element for online activities, and there are some advertising API that help manage the data of the ad, including AdWords API, Google Ad Manager or Amazon Advertising API. It is one of the effective ways to obtain users information and it helps with collecting data even when some users block the cookies. The cost for data collection can be shared with different entities and many API are free to use. However, privacy risk may arise by obtaining and utilizing the data from API, and protection API shall also be adopted for minimizing the risk e.g. SafetyNet API.