

Introduction to Web Science

Assignment 11

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Submission until: February 08, 2017, 10:00 a.m.

Tutorial on: February 10, 2017, 12:00 p.m.

This assignment focuses on **Online Advertisement**. As discussed in the class, teams with exact similar answers that give an indication of copying will receive null points for those questions. If you are taking answers from some source, please cite your sources.

Team Name: Bravo

1 Online advertisement (10 points)

In the videos about online advertisement, you learned about the three different payment methods for online advertisement.

1. Name all three methods.

Ans: 1) Cost Per Click (CPC) 2) Cost per Mille (CPM) 3) Cost Per Acquisition (CPA)

2. Mention the advantages and disadvantages, for publisher and advertiser, of all the payment methods and explain them in your own words.

Ans:

CPM (Cost Per Mille) method: Advantages :

Publisher: Generally favors publisher as the publisher knows how much he will earn by attracting 1000 page views. Advertiser: has to pay for 1000 page views which turns out to be economical.

Disadvantages:

Advertiser: Posses risk to advertiser as the ad may not be appealing to the customer and does not generate any traffic to the advertisers website. Publisher: The publisher should have a high traffic to his website.

CPC(Cost Per Click): Disadvantages :

Publisher: Revenue cannot be predicted. Advertiser: highly susceptible to click fraud.

Advantages :

Advertiser: The advertiser pays a fraction of fee per click and not the entire amount , Publisher : the publisher can sell the surplus clicks in case of high CTR.

CPA (Cost Per Acquisition) Advantage:

Publisher: will get high amount if the item associated with the advertisement is bought by the customer. Advertiser: will pay only if his goal is met. He can relate to the sale figures due to advertisement

Disadvantages:

Publisher : This technique does not guarantee income for the publisher. High risk for publisher , if none of his customers does not buys a item

Advertiser: may have to shell out higher amount.

3. Provide real world examples for the three payment methods.

CPC: Google Adwords, CPM: Buysellads.com CPA: Linkshare

2 Payments in Online Advertisement(15 points)

Provide the complete calculation with your solutions for the following questions.

1. An online advertisement company offers you to advertise your website on a cost-per-click base (CPC) with a cost of 0.70€ per click. Assuming that in average three out of ten visitors of your website are buying a product from which you are earning 20€, would you accept this offer? What is your average profit/loss per visitor?
2. What would be the minimal conversion rate (CR) to guarantee your profit?
3. Two online advertisement companies A and B are making you offers to advertise your website. Company A follows a cost-per-mille (CPM) model with a cost of 2,40€ for displaying your banner advertisement thousand times. Company B follows a cost-per-action (CPA) model charging a commission of 6% from every profit generated on your website through clicks on the banner ad. Assuming a click-through-rate (CTR) of 0.5%, a conversion rate (CR) of 20% and an average profit of 40€ for every transaction on your website, which offer is the best?
4. Assuming an online advertisement campaign for a website has obviously a high click-through-rate (CTR), but the earnings from the website are still very poor. What do you think could be the problem (please provide your answer in one or two paragraphs)?

3 Online vs. TV Advertisement (10 points)

1. Which of the three payment models is most similar to advertisement on TV (*explain your choice and also why you think other models are not similar*)?

Ans: We think Cost Per Mille (CPM) is most similar to advertisement on TV. The other 2 metrics CPC and CPA cannot be related with TV advertisement as both of these payment methods requires tracking of user actions and clicks, which are not possible in TV advertisement.

2. What do you think are the most important advantages of online advertisement compared to advertisement on TV (*highlight 5 advantages and explain each of them*)?

Ans: Following are the advantages of Online Advertisement.

1) On line advertisement allows us to deliver advertisement to relevant sections of people and achieve high throughput. 2) Better tracking and feedback can be obtained and allows to tweak the advertisement to make the ad campaign success. 3) With Internet the advertisement can reach large sections of population at a relatively less cost and time. 4) Online advertisement are available 24/7. 5) Provides better opportunities to create brand awareness in national and international markets.

Important Notes

Submission

- Solutions have to be checked into the github repository. Use the directory name `groupname/assignment11/` in your group's repository.
- The name of the group and the names of all participating students must be listed on each submission.
- Solution format: all solutions as *one* PDF document. Programming code has to be submitted as Python code to the github repository. Upload *all* `.py` files of your program! Use **UTF-8** as the file encoding. *Other encodings will not be taken into account!*
- Check that your code compiles without errors.
- Make sure your code is formatted to be easy to read.
 - Make sure you code has consistent **indentation**.
 - Make sure you comment and document your code adequately in English.
 - Choose consistent and intuitive names for your identifiers.
- Do *not* use any accents, spaces or special characters in your filenames.

Acknowledgment

This latex template was created by Lukas Schmelzeisen for the tutorials of "Web Information Retrieval".

L^AT_EX

Currently the code can only be build using **LuaLaTeX**, so make sure you have that installed. If on Overleaf, there's an error, go to settings and change the **L^AT_EX**engine to **LuaLaTeX**.