DIGITAL MARKETING

Welcome to the course!

Among every $100 Hongkongers spend on retailing,
how many dollars are spent online?

Which products (or services) do Hongkongers purchase online?

What are the richest companies in the world?

What are the richest companies in the world in 2010?

What are the richest companies in the world in 2000?

Which company is the biggest opponent of HSBC?

What's this product?

Uber collects data on your smartphone battery. But why?

Many retailers offer free Wi-Fi to their shoppers. But why?

How many couples meet their partners online?

On average, how much time does a Hong Kong youth spend on their smartphones?

What is the world's most downloaded APP?

The Internet is changing our lives

Discussion

How does Internet affect purchasing decisions?

Showrooming

The practice of examining products in a store and then buying it online for a lower price.

Top categories affected by showrooming?
> Electronics & Appliances
> Books & Music
> Clothing & Shoes
> Furniture & Home

60% in 2013 -> 35% in 2018. Why?
> Increasing online presence for traditional retailers
> Offer price matching
> Digital friendly in-store environment (e.g. e-payment, digital coupons)
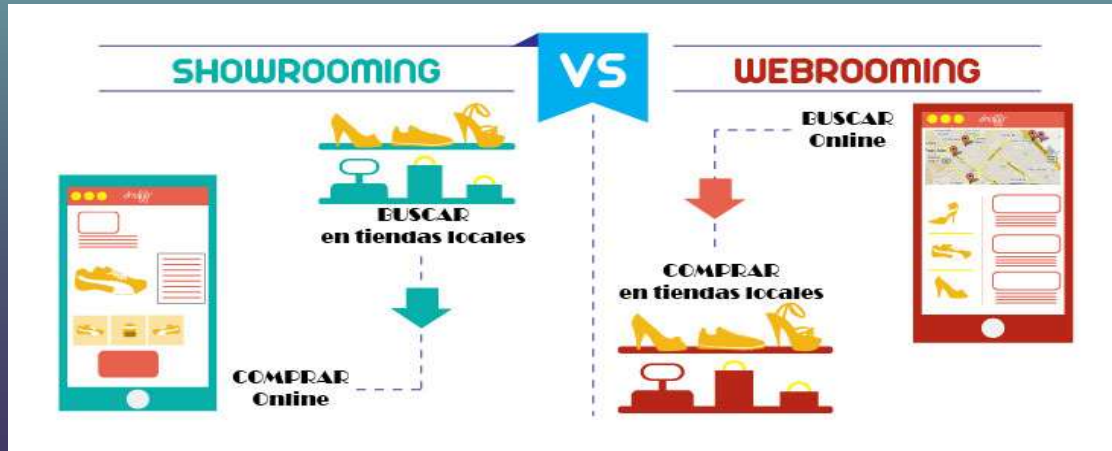> Flexible return policy

Rise of webrooming

Webrooming refers to the process of researching products online and then visiting a store to make a purchase
Webrooming more common than showrooming (46% vs. 35% in 2018)
Millennials prefer webrooming

Mobile Grocery Shopping

What is digital marketing?

"Digital Marketing is the use of Internet connected devices and electronic media to engage a customer."

Search advertising
Display advertising
Social media marketing
…

What is this course about?

Overview of digital technology + Underlying Business/Marketing concepts

Aim is not mastery of all the topics, but to give an overview of most important topics

The list of topics covered in this course can be found in the syllabus.

Who should take this course?

Undergraduate students

Learn the basics of Digital Marketing
Learn the basics of data analytics
Already have a background in basic marketing /advertising

This is not a course about…

Introduction to Marketing

Web development or Web Design

Public Relation/ Journalism

e-Commerce

Entrepreneurship class - build app/website, become a millionaire!

A specialized course intended for one specific aspect
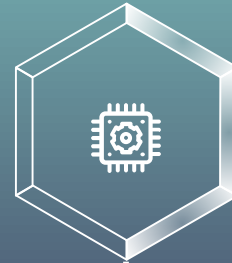
    Search Engine Marketing

    Social Media

This course adopts methodologies from

Computer Science

Statistics

**Economics**

Leveraging your competitive advantage

Compared to traditional marketers, you know how to program and how to analyze data.

Compared to statisticians and computer scientists, you understand consumers better, and know how to apply results to business settings.

Compared to economists, you not only know the theory, but also know how to apply the theory to solve real-world marketing problems, and test the theory using real-world data.

The LOOP

Real World	→	Data	→	Data Product	→	Theory
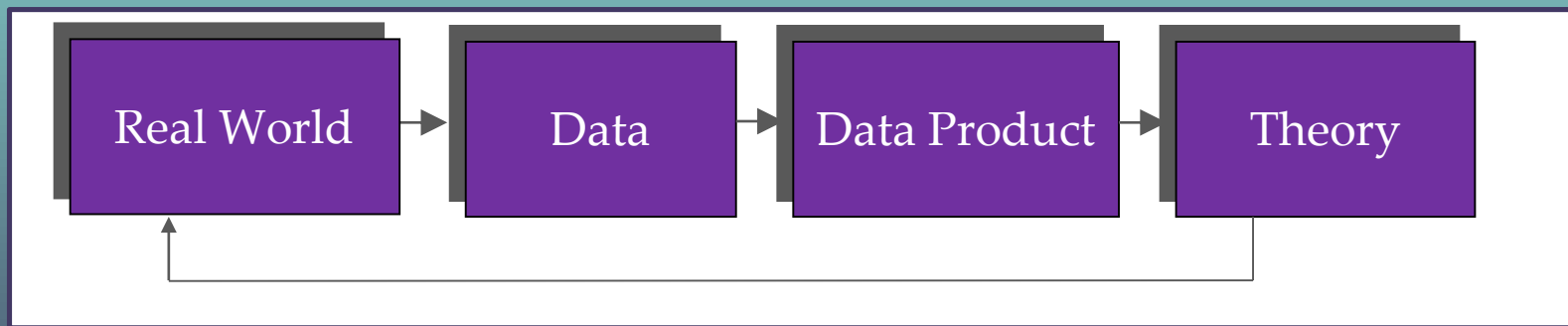
We emphasize on data, data, and data

"Talk is cheap, show me the data!"
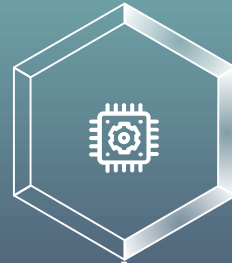
The Instructor

Xi Li, Professor of Marketing. KKL 836

PhD in Management, University of Toronto.
M.Phil. in Operations Research, HKUST.
B.E. in Computer Science, Tsinghua University.

Director, Asia Case Research Centre
Associate Director, Institute of Digital Economy and Innovation
Research interests: Algorithms, big data and online marketplaces.

Do I really want to take the course?

I don't know. It depends. But let me offer you some advice.

Take the course if
> You are interested in data analysis, and you are considering to become to a data scientist in the future.
> You want to understand how the digital marketing industry operates and evolves over time.
> You want to explore rigorous research methodologies from different areas.

Don't take the course if
> You hate data analysis or programming.
> You already know the materials to be covered in the class.
> You want to pick an easy course to fulfill your credit requirement.

Why should we study Digital Marketing?

Why go digital?

Consumers are online, more than ever before!

Firm productivity can be significantly improved by digital technology and data analytics

Better promotion effectiveness via SEO and online advertising
Better engagement between firms and customers via social media

Average Time Spend in the US, 2019

Hrs:mins per day among population
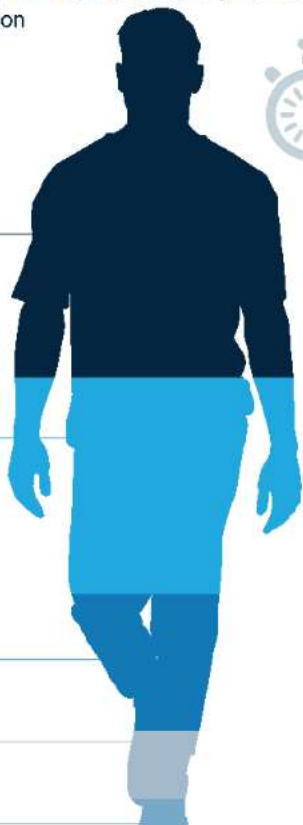
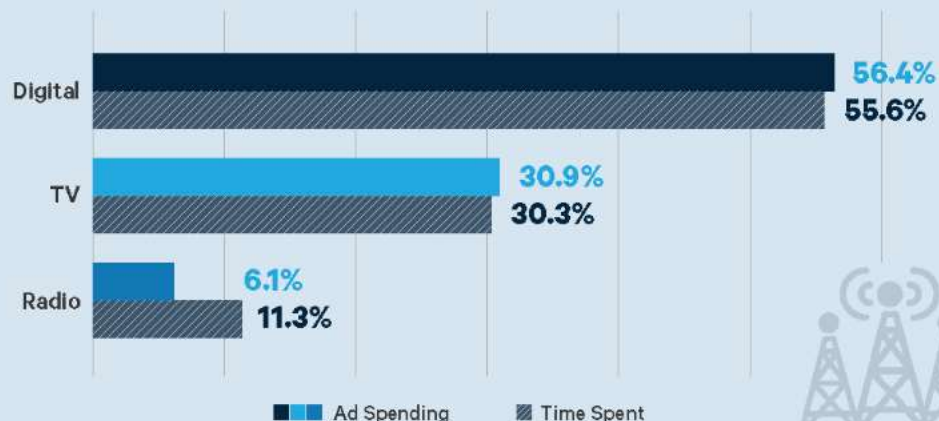Digital **6:35**

TV **3:35**

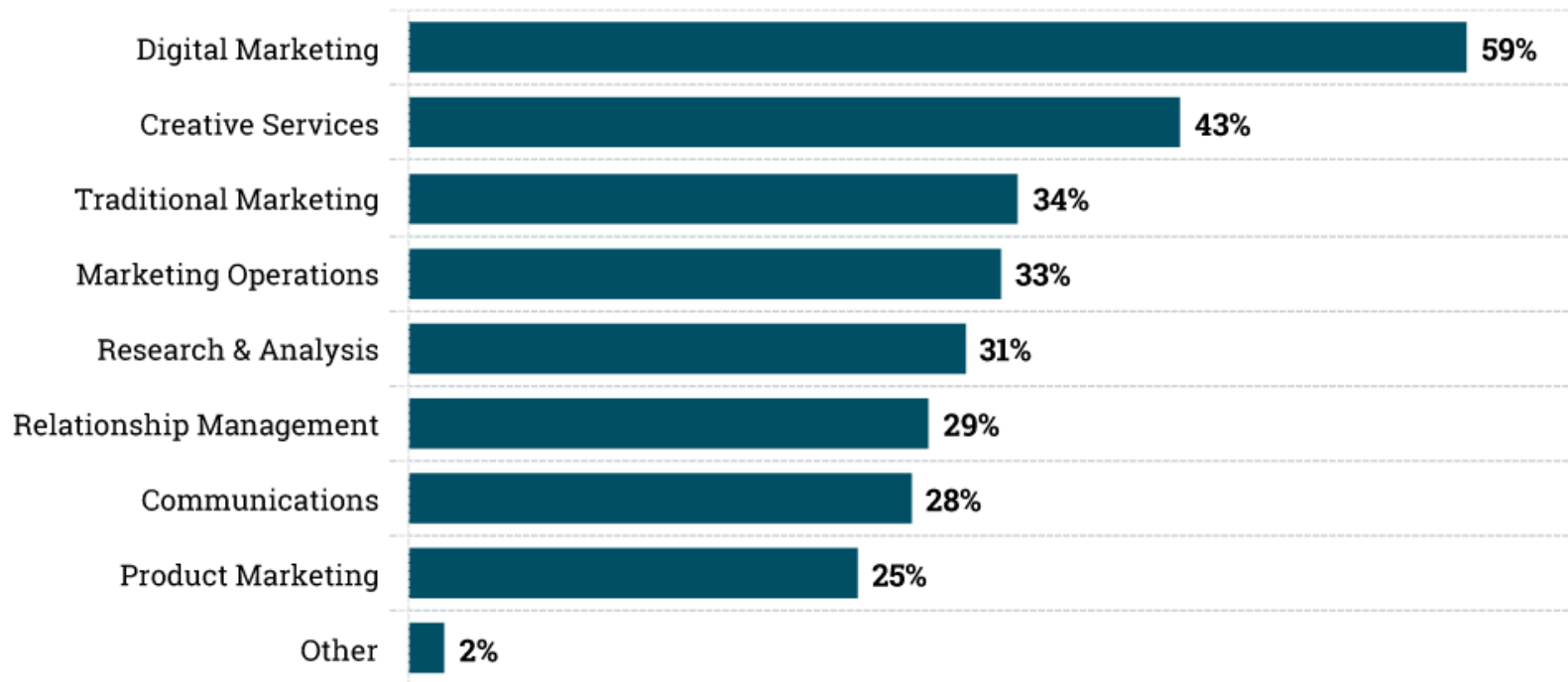Radio **1:20**

Newspaper **0:11**

Magazines **0:09**

Average time users spend watching digital video everyday
2 hours, 13 minutes

Share of Time Spent with Media vs. Ad Spending in the US, 2019

Digital — 56.4% / 55.6%

TV — 30.9% / 30.3%

Radio — 6.1% / 11.3%

Ad Spending   Time Spent

Demand for Marketing Talent in 2018, by Function

marketing charts

Function	Percent
Digital Marketing	59%
Creative Services	43%
Traditional Marketing	34%
Marketing Operations	33%
Research & Analysis	31%
Relationship Management	29%
Communications	28%
Product Marketing	25%
Other	2%

How is digital marketing different?

More targeted and context relevant

More use of personal devices rather than mass media

Use of social aspect and viral marketing

More measurability

Additional Course Information

Textbook? No.

Website:

https://ximarketing.github.io/_pages/teaching
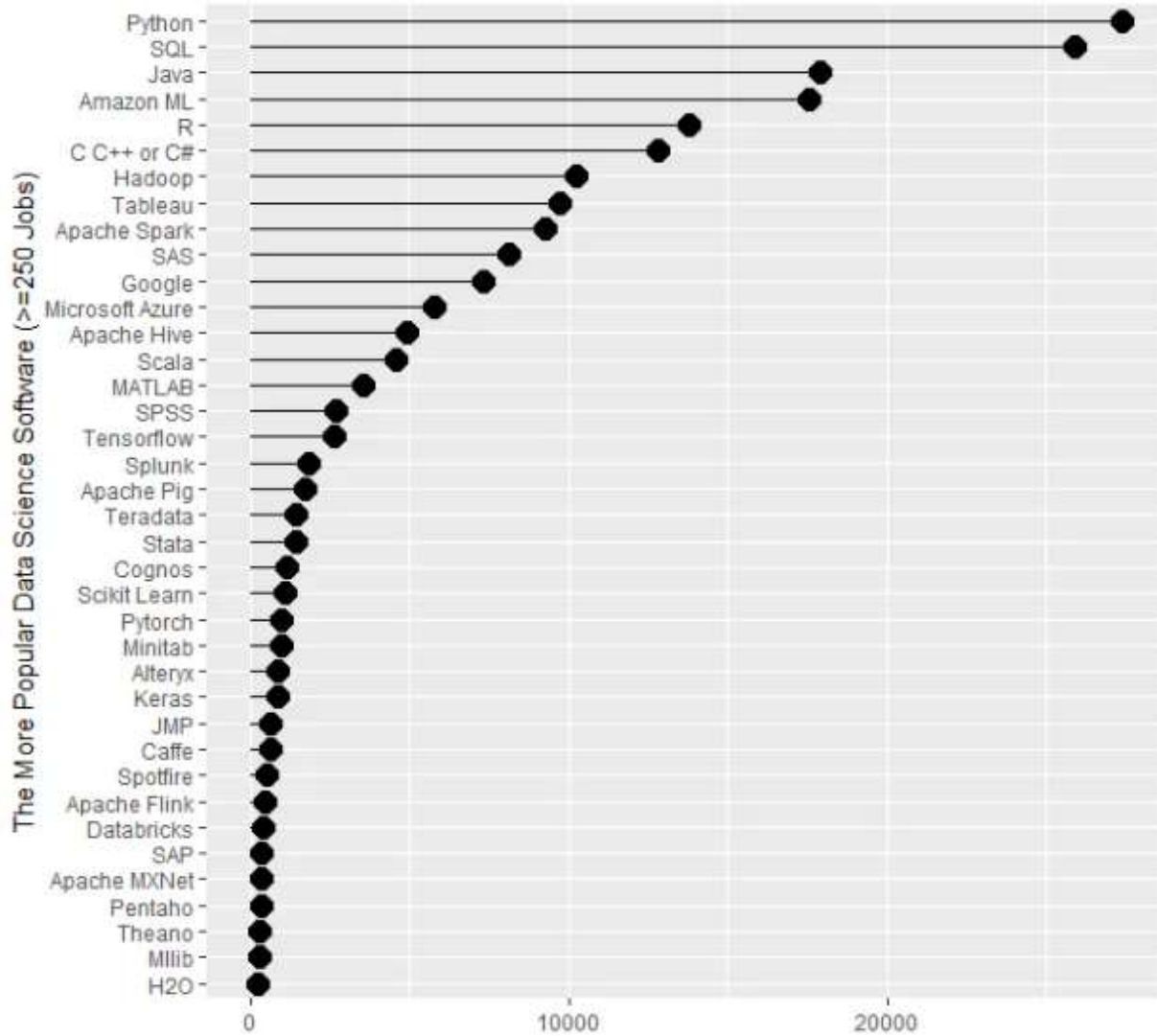
Password: HKU

Course Overview

Data analytics with R.

You can use Excel or SPSS, but they are too simple and cannot handle complex data analysis projects.

R is a free software that is commonly used for statistical analysis.

It is not only useful for digital marketing, but also useful for other purposes such as machine learning and optimization.
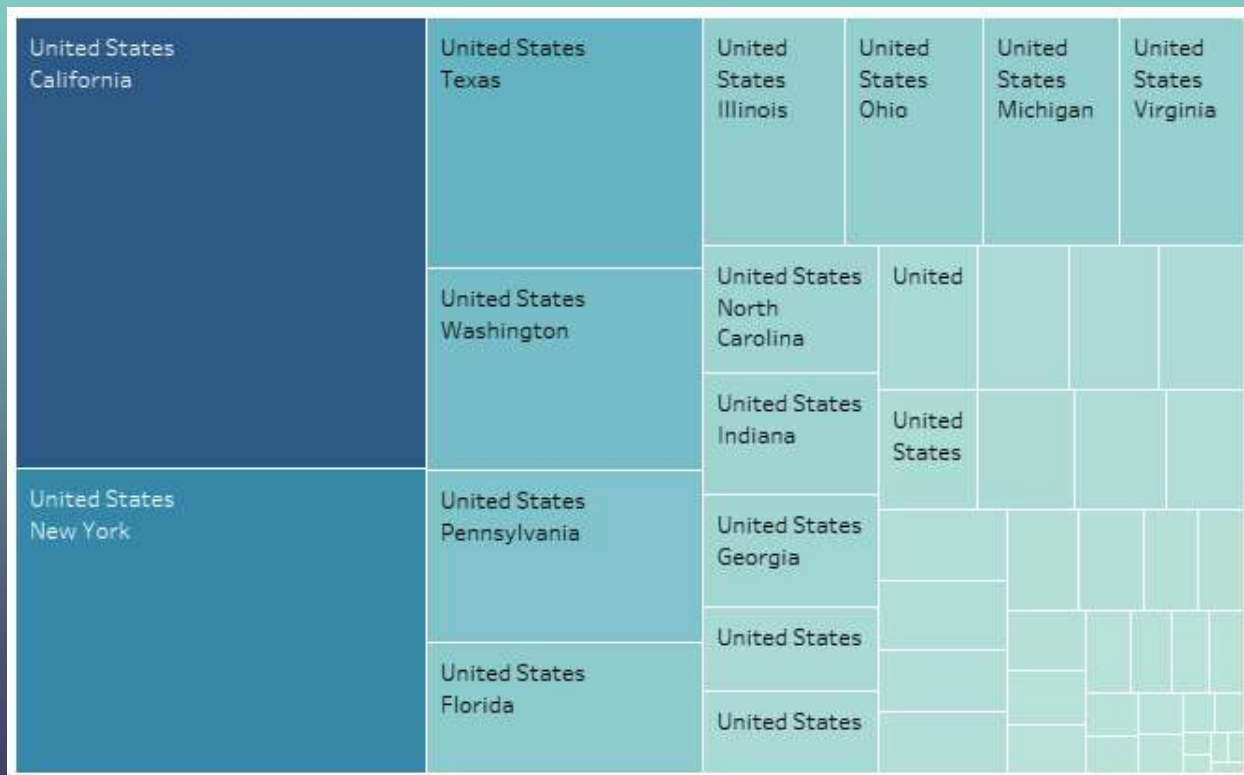
Course Overview

Data visualization with Tableau.

Data visualization gives us a clear idea of what the information means by giving it visual context through maps or graphs.
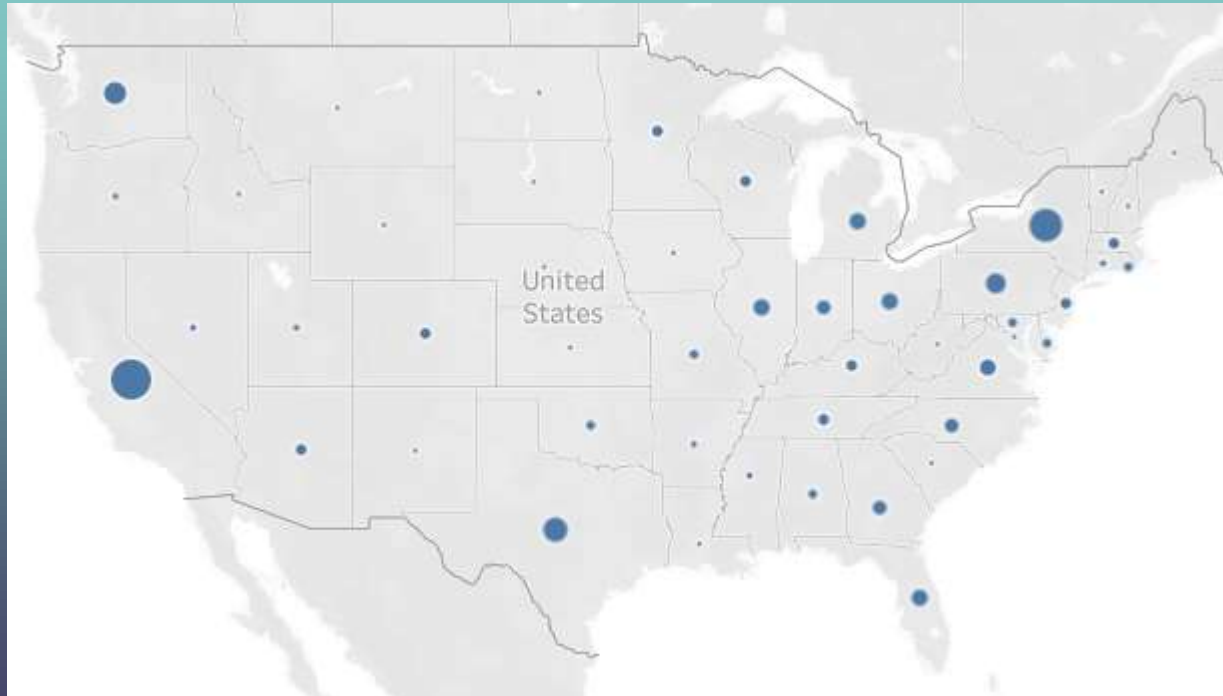
When you want to show your results to others, the best way to use figures --- "*A picture is worth a thousand words*".

Tableau

Tableau

Course Overview

Web Scraping with R.

Data scraping allow you to scrawl information from websites, e.g., online marketplaces. For example, you can collect product information from HKTV Mall, weather information from Hong Kong observatory, and tweets from Twitter.

Warning: Do not expect that you can become an expert in data scraping within one class. This is simply an introduction, and you need more practice yourself.

Course Overview

This may be the only web scraping class in a business school (I don't know the answer, through).

We will see how to gather information from HKU faculty webpage:

Dr. Jingcun CAO   Dr. Chu (Ivy) DANG   Dr. Jinzhao DU

Course Overview

Search Engine Optimization.

We all know that Google is the most popular search engine (and even the website) over the world.

We are going to address the following questions: (1) How does Google (and other search engines) work? (2) How to improve your page rank on Google, so that consumers can more easily find your website through searching?

Course Overview

Paid Search.

While SEO allows you to improve your page rank for free, you can also spend money to get more attentions from consumers.

We are going to address the following questions: (1) What is online advertising? (2) How does Google sell its search results through auctions? (3) How to buy paid ads? (4) How to develop you keywords list?

Course Overview

Display Advertising and Content Creation.

How to offer targeted ads based on user behavior?
How are displayed ads bought and sold?
How to design content?
What is click fraud?

Course Overview

Social network and mobile marketing

We will discuss ways to take advantage of the social network to engage your users and amplify the influence of your brand.

We will introduce some measures of social networks and use R to process social network data.

We will also discuss some characteristics of mobile marketing.

Course Overview

Social media.

Setting guidelines and policies for your social media: make sure that you are using social media platforms in a correct way.

Managing social media campaigns using HootSuite.

Ways to engage your users through social media.

AB testing for social media optimization.

Course Overview

Social media (Continued).

Social listening: listening to your consumers on social media. Social listening is useful for brand monitoring, watching the competition.

Influencer marketing – amplifying your brand on social media.

Grading

Your grades will be determined by the following components:

Group-level data-analysis task: 15%
　　No presentation; report needed
Group-level research project: 25%
　　Both in-class presentation and report required

In class participation: 10%
Final examination: 50% (open book open notes, MC questions only)

Data Analysis

In this course, we are introducing a practice class on data analysis. This is one unique feature of our course.

You have already learned about R and Tableau. Perhaps you can also use many other tools such as SPSS, Excel, Python etc.

I will give you some real digital marketing data, and your goal is to study the data using the tools you know --- It's entirely up to you how you want to play with the data!

Data Analysis

You are going to work with your teammates on the data project. Then, each group will submit a report illustrating the findings from the data. It will be graded, and it affects your final grade.

We will start with the data analysis in the class, and you will finish all the analysis after the class.

The purpose of the data project is to help you understand the data analysis methodologies and gain a sense of real data that data scientists are analyzing everyday.

Overall Course Structure

We have 10 lectures for each class.

For class 1A, the Oct 2 and Oct 23 classes will be cancelled (public holiday).

For class 1B, our first classes are already cancelled.

Overall Course Structure

We have 10 lectures over the entire semester. Among them, we are going to have

1 introduction class (today)
1 data workshop
7 regular lectures
1 class for project presentation

Research Project

Good news: Because we already have the data analysis task, you do not need to collect or analyze data in your research project.

What you need to do: Choose a company and analyze the company's digital marketing strategy.

You are free to choose your own company, but make sure that the company is active in digital marketing (at least it should have social media accounts and its own website).

What you should focus on

Company website: Any issues? What can the company do to improve its website?

Social media (e.g., Facebook, Instagram, Twitter): Is the company managing its social media accounts? Any issues? What would you suggest the company?

Online sentiment: How people are discussing the company or its brands in online review platforms (e.g., TripAdvisor, Amazon)? What's wrong?

Suggested After-Class Workload

Group level:

    Data Analysis Task: 6 hours (+ 3 hours in class exercise)

    Research Project: 12 hours (No data analysis required).

Individual preparation for final: 6 hours

In sum: around 24 hours

More on course workload

It seems that the course has several components (data analysis, research project and final), in fact the workload is not that much:

In the past, we need to collect data and analyze the data in the research project, but now you do not need to do so. Moreover, I will give you the data directly so that you do not need to collect it.

As you work on the research project, you will use most of the concepts taught in class, so it will be very easy to review for the final exam.

More on course workload

Usefulness

Digital Marketing

Workload

TODO List

If you decide to take this course, here is what you should do after today's class (Important!):

Form groups with your classmates. Think about the project you are going to work on.

Individual task: Install R on your laptop. We will be using it in the next class.

Group Formation

Each group consists of at most 6 students (and at least 1).

You need to choose a name for your group, e.g., "Marketers", "Fantastic", "A Plus"…

Email the TA (April; aprilsiu@hku.hk) your group information (group name, your own names and HKU ID) before Sep 12 (Class 1A) or Sep 23 (Class 1B).

Let the TA know if you cannot find a group.

Let's <u>Download</u> and install R.

Your installation path must NOT contain any non-English characters. Otherwise, you will have troubles using it.

安裝路徑必須為純英文，否則運行可能出錯。

Next, let's download R-Studio.
It is also free.

Your installation path must NOT contain any non-English characters. Otherwise, you will have troubles using it.

安裝路徑必須為純英文，否則運行可能出錯。