Web Analytics

This course will change what you think is possible with internet data!

We live in a world where vast swaths of data are generated every day on the internet: user queries in search engines, discussions in social forums, chat histories in online social media, transactions in electronic commerce, and so on. Web analytics is a set of concepts and techniques that allows you to access, understand, and use this data as the new "oil" for business, science, government, and society.

In this course you will learn the two core components of web analytics in modern businesses. First, you will learn the skills that are required to extract and integrate data from online sources, and recognize when and how to use this data to obtain actionable business insights. Second, you will learn powerful conceptual and analytic approaches to analyze web structure and usage, including how search engines work, how marketing on the web works, and how to model and analyze population-scale networks.

You will become familiar with the fundamental principles, uses, and technical details of web analytics through a combination of lectures, discussions, hands-on sessions, and real-world examples. Equal emphasis will be put on *understanding* fundamental concepts and *applying* these concepts yourself. Basic familiarity with programming (especially in Python) is useful, but no prior programming experience is required: we will cover everything you need in class. This is designed to be an experiential, hands-on course that requires a substantial time commitment. Your reward - proficiency in some of the most sought-after skills in today's market - will be even more substantial!

After taking this course you will be able to:

- understand when and how web analytics provides a competitive advantage in modern business
- understand and perform the steps comprising web content, structure and usage analytics
- identify tools to assist web analytics functions in your business
- build and evaluate data science solutions related to web analytics
- know how to access web data by building your own crawlers or through APIs
- understand how search engines and search engine marketing work
- compare popular online analytics tools and vendors, and know how to choose the right solutions
- plan and carry out a business web analytics project end-to-end
- use Python to get, clean, analyze, and visualize data