EXperimental Learning

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Big Data and Social Analytics certificate course

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MODULE 2 UNIT 1
Sources of big data

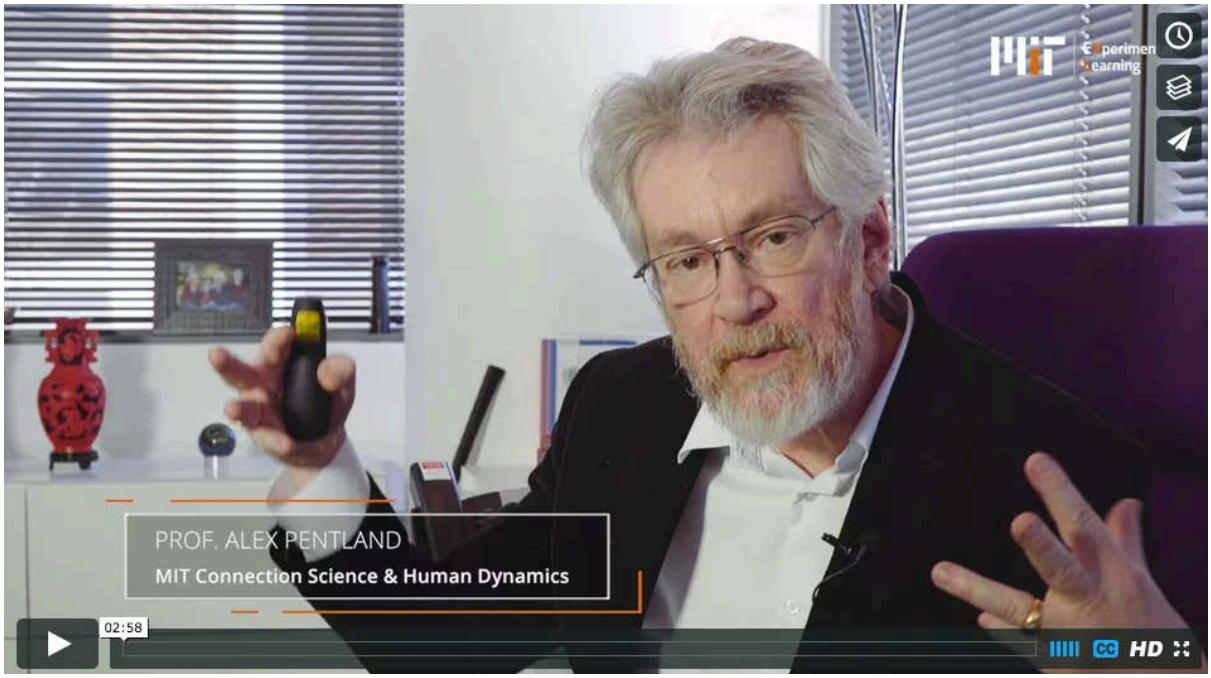
MIT BDA Module 2 Unit 1 Video Resource

Learning outcome:

LO2: Identify typical sources of data and how personal sensors can be used to generate high-resolution features of human behavior.

Title: Sources of data and how they can be used to predict human behavior

In Video 2, Professor Alex Pentland discusses different sources of data, and how they may be used to interpret and predict human behavior.



Video 2: **Professor Alex Pentland** - Sources of data.
(To download the video, click here.)

As Professor Pentland mentions in the video above, by its very nature, big data comes from a variety of sources. These include archives, documents, media, business applications, social media, public web, data storage, machine log data, and sensor data. To build on what you learned in the video, familiarize yourself with the "Intelligence by Variety – Where to Find and Access Big Data" infographic.

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Resource 1: Intelligence by Variety – Where to Find and Access Big Data. (Source: http://staging.kapowsoftware.com/resources/infographics/intelligence-by-variety-where-to-find-and-access-big-data.php)

Arek Stopczynski takes this topic further in Video 3 below, in which he provides an introduction to another source of data, personal sensors, and the types of data that can be collected through personal sensors. Stopczynski also discusses how this personal sensor data can be processed and analyzed to create high-level features of human behavior, such as human mobility and social interactions.

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Video 3: Arek Stopczynski - Introduction to personal sensors.
(To download the video, click here.)

As you have heard in Video 3, smartphone subscriptions are increasing at a rapid rate worldwide, and many people around the world already have smartphones, which they constantly use throughout the day. This presents an opportunity to capture valuable big data through personal sensors, which are a rich source of data.

The following resources will elaborate on some of the ways that the data obtained from personal sensors can be used in big data analysis. Although the resources do not form part of the content covered in the assessment associated with these videos, you are encouraged to read through them to gain a better understanding of the use of big data in context.

- Tracking Human Mobility Using Wi-Fi Signals
- The Strength of Friendship Ties in Proximity Sensor Data
- The fundamental structures of dynamic social networks

You are now ready to apply your knowledge

Now that you've engaged with Videos 2 and 3, as well as the "Intelligence by Variety" infographic, you are ready to apply your newly gained knowledge by completing the corresponding activity in the Apply unit. You can access this activity by navigating back to your module learning path, or click to access it directly from here:

2.4 Assessment Quiz: Data sources and personal sensors

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