DLI Accelerated Data Science Teaching Kit

# Lecture 1.2 - What is Data Science?

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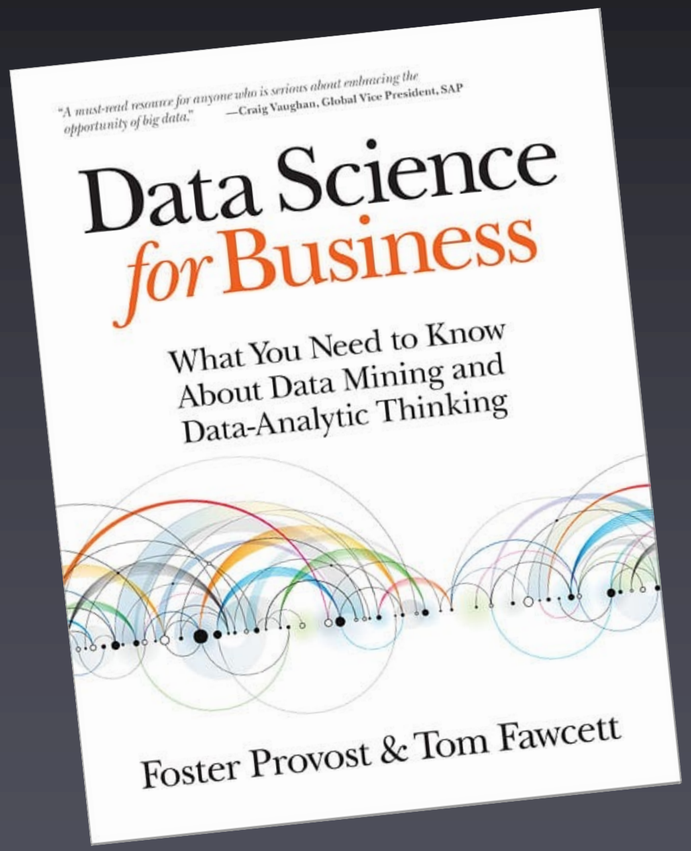
# What is Data Science?




"At a high level, data science is a set of fundamental principles that guide the extraction of knowledge from data."

Principles can be statistical, computational, algorithmic, visual, etc.

# What is Data Science?

## In more detail…

- Relatively young field
- The term often broadly used, due to its **hype**
- "Definition" (e.g., what it is, what it includes) often hotly debated; a **controversial** topic! (https://en.wikipedia.org/wiki/Data_science)
  - Related to statistics, computer science, visualization, data mining, machine learning, human-computer interaction, big data, distributed computing, and more!

# What is Data Science?

## Why so complex?

- Data science is **interdisciplinary**, due to its goal to aid discoveries, decision making, etc.
  - Applicable to many domains (e.g., sciences, finance, healthcare, etc.)
  - Often requires analysis of large amount of data
    (helpful to use scalable algorithms, distributed computing, etc.)
  - Statistics is a pillar of data science
  - Users may need to explore data, and understand and present analysis results (benefits from visualization, good user interface design, etc.)
  - And more!

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# Thank You