Week1

**Ask**

Find out the question and be ready to solve it.

**Prepare**

Prepare the forms, questions to ask.

**Process**

Collect, store, manage, and protect data.

**Analyze**

Discover the pattern in the data.

**Share**

Share your report and communicate the results.

**Act**

Implement change and take action.

Data is the list of **facts** that might be useful.

Discussion Prompt: Meet and greet.

I am a high school student from China.

The reason why I took this course is I am curious about how data works in modern days and eager to learn the skills like data visualization and SQL. (But the fact is I have a few things to do when I was free, while I found a few games enjoyable.)

I wish this course can take away my free time and brings me some knowledge that can be applied in research at the University.

God, I am I high school student, but I believe the course in Coursera doesn’t need much prerequisite knowledge. (perhaps)

Computer science is my first interest.

After taking the certificate, I might take other algorithm courses.

Dimensions of data analytics

Statistics: make one important decision under uncertainty. (Find right answer)

Machine learning: make many decisions under uncertainty. (Find high favored answer)

Analytics: not decide uncertainty. To meet unknown of unknown. (Explore the uncertainty)

Data ecosystem

Data ecosystem: A group of elements that interact with one another to produce, manage, store, organize, analyze, and share data.

Cloud: A place to keep data online, rather than a computer hard drive.

Data science: Creating new ways of modeling and understanding the unknown by using raw data.

Data analysis: The collection, transformation, and organization of data, to draw conclusions, make predictions, and drive informed decision-making.

Data analytics: The science of data.

Data-driven decision-making: Using facts to guide business strategy.

Analysts use data-driven decision-making and follow a step-by-step process. You have learned that there are six steps to this process:

1. Ask questions and define the problem.
2. Prepare data by collecting and storing the information.
3. Process data by cleaning and checking the information.
4. Analyze data to find patterns, relationships, and trends.
5. Share data with your audience.
6. Act on the data and use the analysis results.