HUDK 4050:
CORE METHODS
IN EDM

9/28/17 9:40 AM

Announcements

Class Activity

- I made an error, I have added an amendment

Swirl

- Bug for some users in Unit 2 where there is a loop on a question about lesson difficulty

- Another bug is now fixed. Please delete all lessons and reinstall

Matrix vs. Data Frame

Matrix

- Uses less memory
- Operations are faster
- Requires same data type (character or numeric)
- Useful for matrix algebra

Data Frame

- Convenient
- Intuitive
- Can have different data types in one format
- Useful for referring to columns individually

Other Useful Operations

Transpose Function

- t()
- Transposes a matrix or data frame
- rows ⟶ columns, columns ⟶ rows
- Output = matrix

Diagonal Function

- diag()

- Replace or extract the diagonal of a matrix

Matrix Multiplication

- %*%
- Multiplies two matrices together
- Will become useful when we get to Social Network analysis

Activity

- Create a data frame called **A** of three variables, each having three values

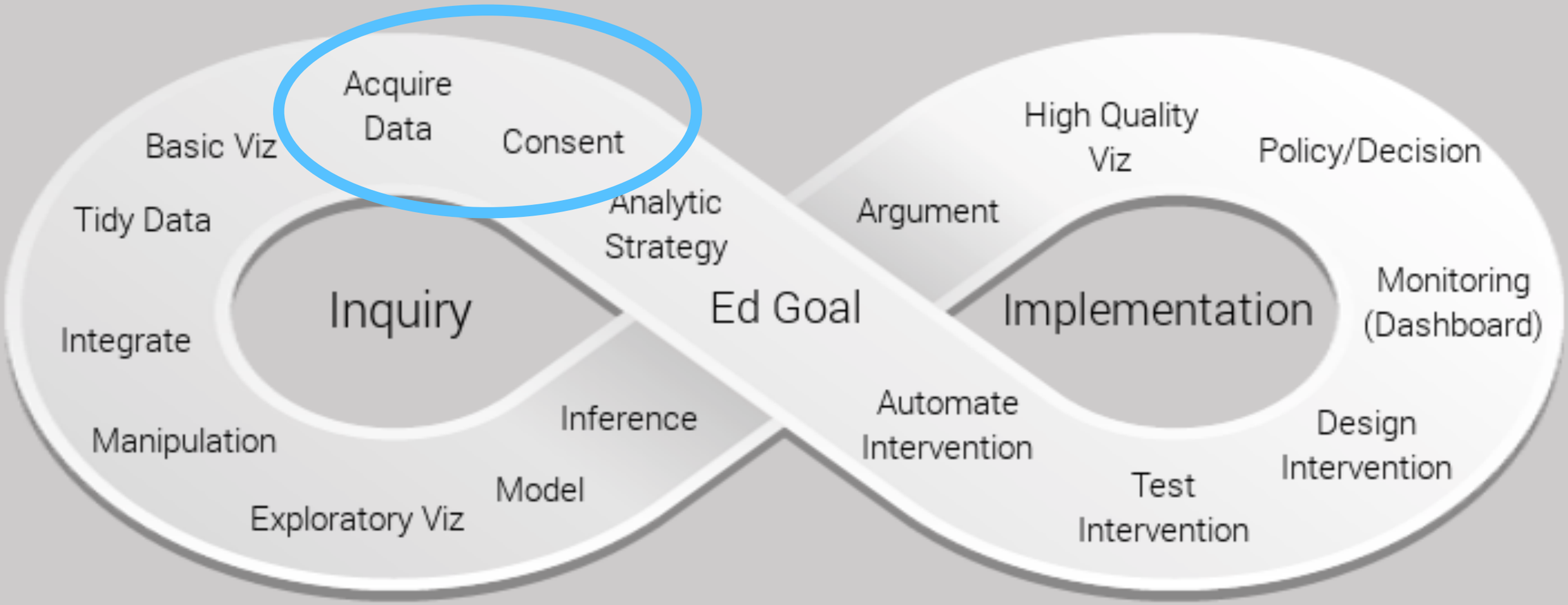
- Convert the data frame to a matrix called **B**

- Create a matrix called **C** that is the transposition of **A**

- Create a matrix called **D** that is the multiplication of **C** and **B**

- Replace the diagonal values in **D** with missing values

Ed Data Science Cycle



Activity

- Educational goal:
- Baseline: test
- What level should we be looking at?
- What variation do we need?
- Is there any other information we need
- What information should we track?
- Do we need to ask permission?
- Do you wants to share their score? Why/why not