INTRODUCTORY AI/ML IN PYTHON

Homay Valafar

Director of the Al Institute

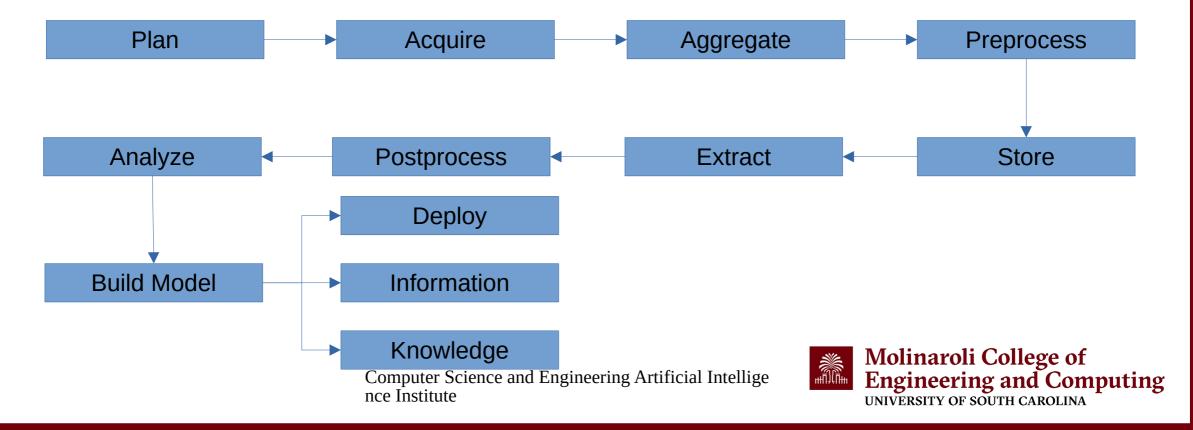
Chair of Computer Science and Engineering



Molinaroli College of Engineering and Computing

Data Lifecycle/Path

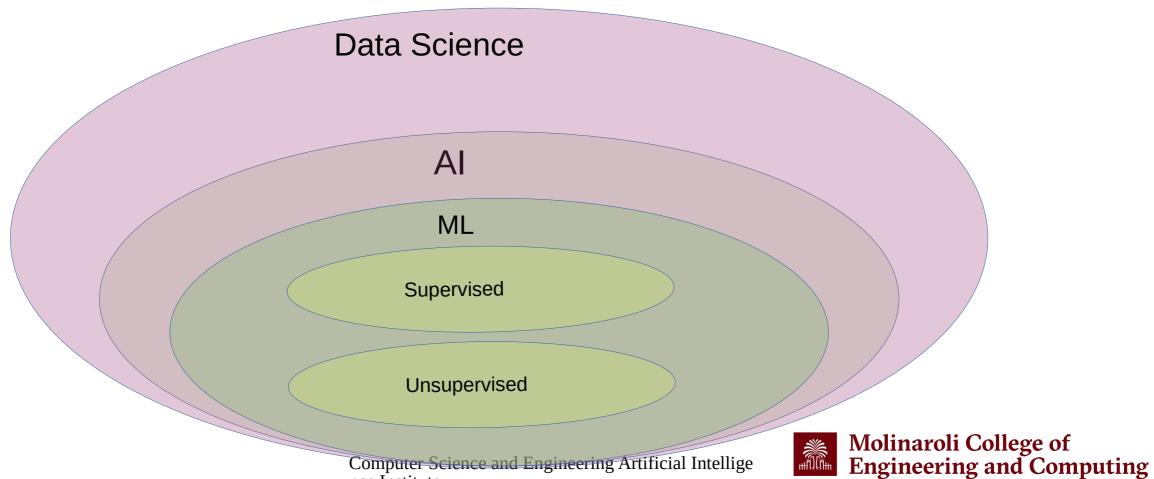
- Data scientist play a role at each step, to various degrees
- AI/ML play a critical role in application of data processing



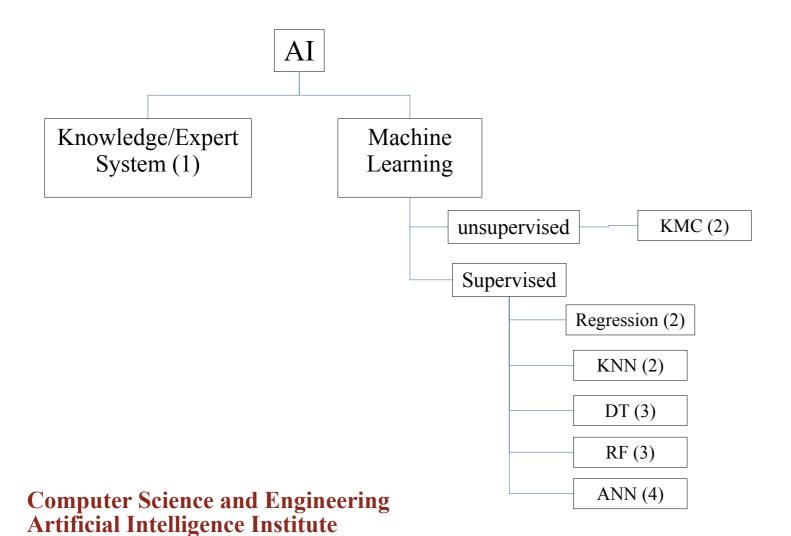
Hierarchy of Data Science, AI, and ML

The relationship can be represented as the following Venn diagram

nce Institute



Taxonomy of Artificial Intelligence





AI versus ML

- Unintelligent/manual systems
- •
- Examples of Al but not ML
 - Programmable thermostat
 - Example: if after 7 PM then drop temperature to 76°
- Examples of AI that are ML
 - Smart thermostats
 - Observes and learns your preferences for temperature
 - Given the data, find patterns that determine responders to a drug
 - Given the data, find the distinguishing attributes of smoking
 - Given the data, find the common characteristics of patients with vascular disease
 - Given the images, find the perpetrators in a crowd









THANKS!

Homay Valafar Computer Science and Engineering homayoun@cse.sc.edu

