Welcome to the Course 🤗 !

Machine Learning Pathway

ML Pathway

Real World

ML Pathway

Real World

Problem to Solve

How to fix or change X?

Question to Answer

How does a change in X affect Y?

ML Pathway

Real World

Data Product

Mobile Apps, Services, Websites, etc...

Data Analysis

Reports, Visualizations , Communications, etc...

ML Pathway

Real World

Data Product

Data Analysis

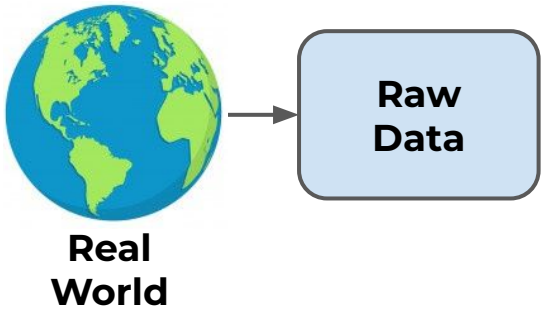
ML Pathway

Real World

Data Product

Data Analysis

ML Pathway



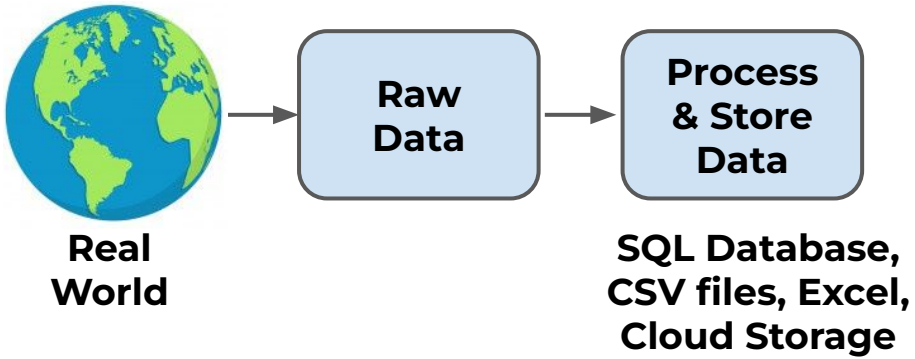
ML Pathway

Real World

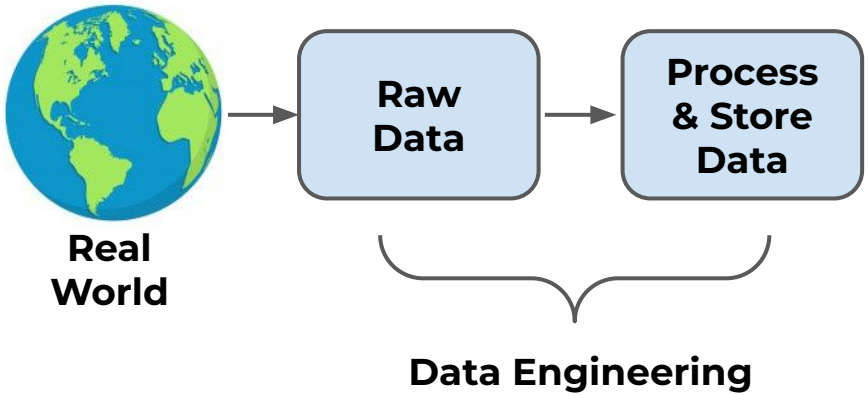
Raw Data

Physical Sensors, Surveys, Simulations, Experiments, Data Usage, etc...

ML Pathway


Raw Data
Process & Store Data
Real World
SQL Database, CSV files, Excel, Cloud Storage

ML Pathway



ML Pathway

Real World

Collect & Store Data

ML Pathway

Real World

Collect & Store Data

Clean & Organize Data

Reorganize Data, Dealing with Missing Data, Restructure Data, etc...

ML Pathway

Real World

Collect & Store Data

Clean & Organize Data

Reorganize Data, Dealing with Missing Data, Restructure Data, etc...

ML Pathway

Real World

Collect & Store Data

Clean & Organize Data

ML Pathway

Real World

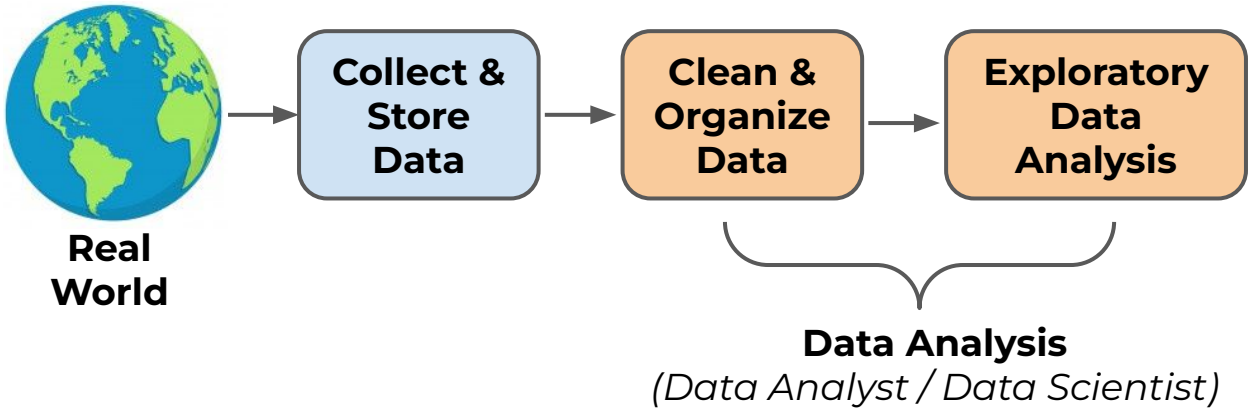
Collect & Store Data

Clean & Organize Data

Exploratory Data Analysis

Statistical Analysis, Visualizations

ML Pathway


Collect & Store Data
Clean & Organize Data
Exploratory Data Analysis
Real World
Data Analysis
(Data Analyst / Data Scientist)

ML Pathway

Real World

Collect & Store Data → Clean & Organize Data → Exploratory Data Analysis

Question to Answer

ML Pathway

Real World

Collect & Store Data → Clean & Organize Data → Exploratory Data Analysis

Data Analysis

ML Pathway

Real World

Collect & Store Data

Clean & Organize Data

Exploratory Data Analysis

Report

Visualization

Communication

Data Analysis

ML Pathway

Real World

Collect & Store Data

Clean & Organize Data

Exploratory Data Analysis

Report

Visualization

Communication

Data Analysis

Make Decisions
Answer Key Questions

ML Pathway

Real World

Collect & Store Data

Clean & Organize Data

Exploratory Data Analysis

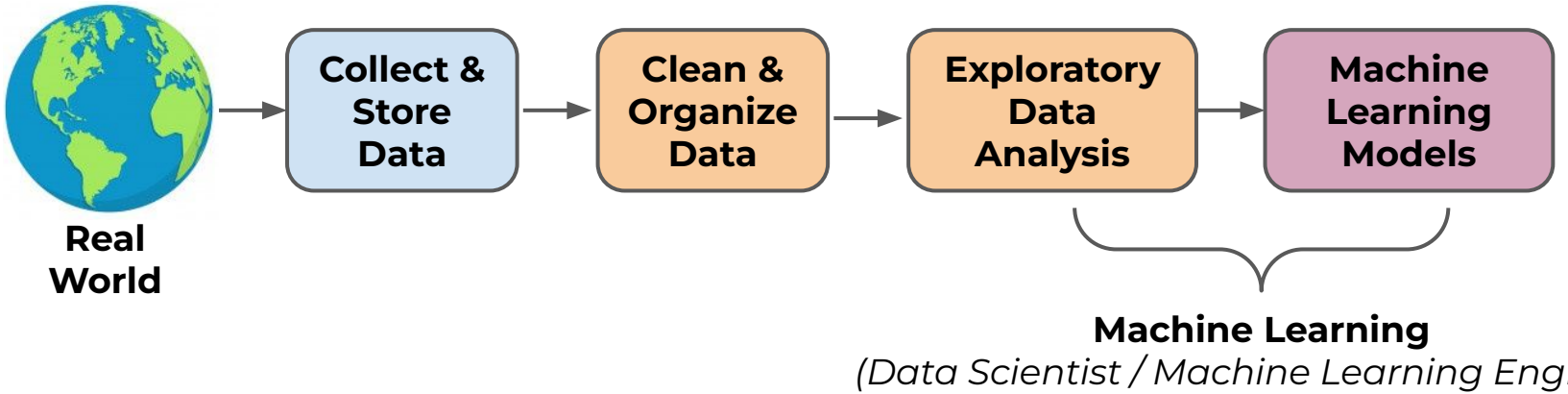
ML Pathway

Real World

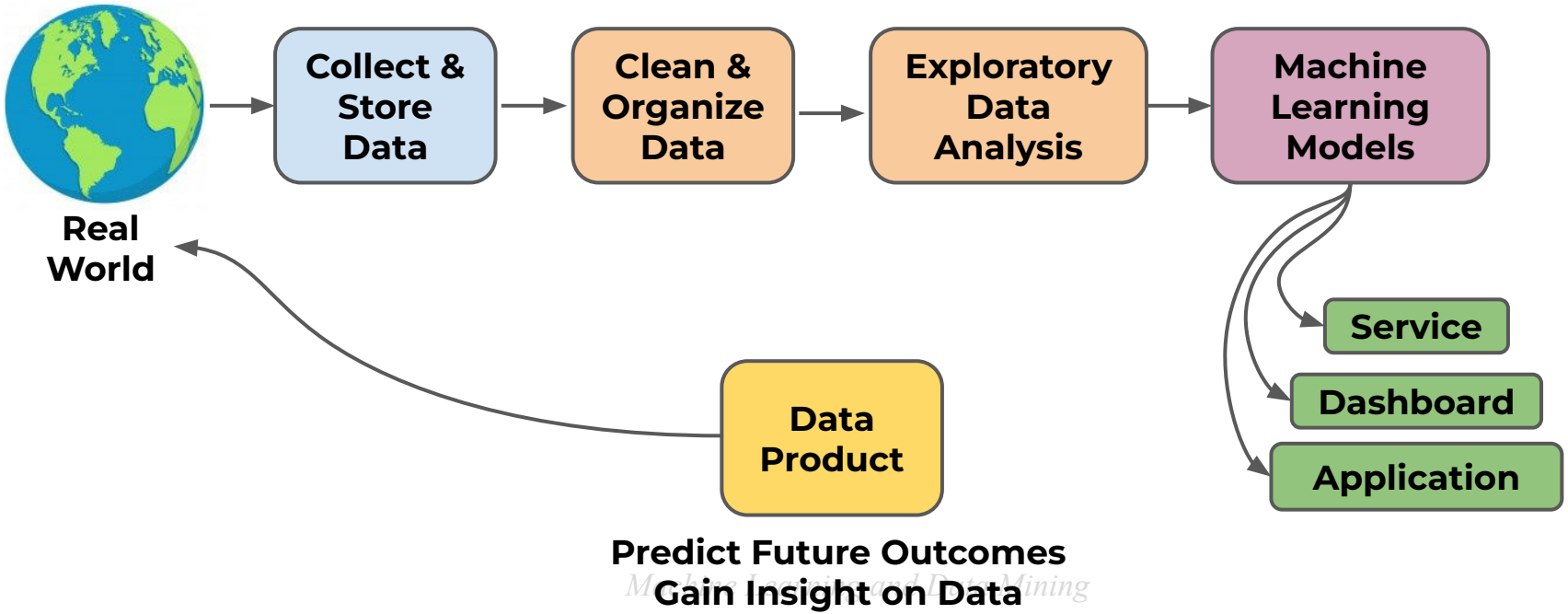
Collect & Store Data → **Clean & Organize Data** → **Exploratory Data Analysis** → **Machine Learning Models**

Supervised Learning:
Predict an Outcome
Unsupervised Learning:
Discover Patterns in Data

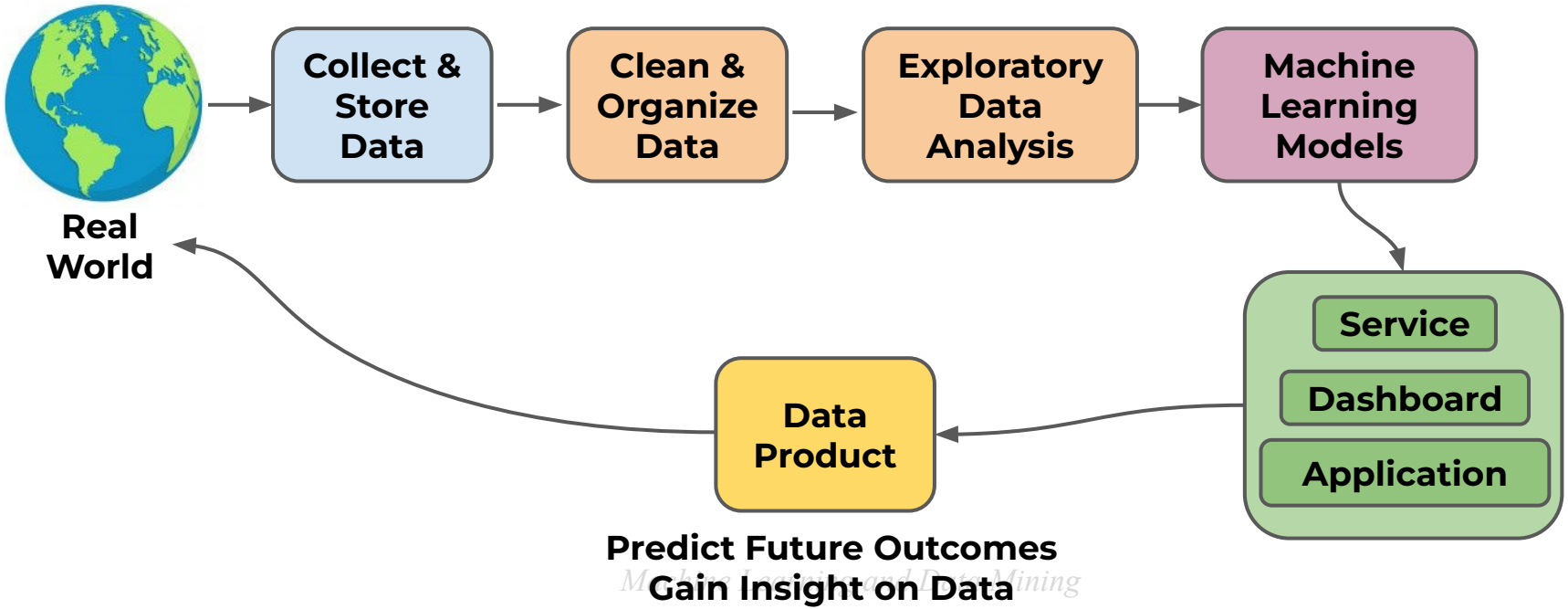
ML Pathway


Real World
Collect & Store Data
Clean & Organize Data
Exploratory Data Analysis
Machine Learning Models
Machine Learning
(Data Scientist / Machine Learning Engineer)

ML Pathway



ML Pathway



ML Pathway

- Now that we understand the general dynamics of the Data Science and Machine Learning Pathway ,we can begin to focus on learning various Python libraries well suited for each of these major components!