

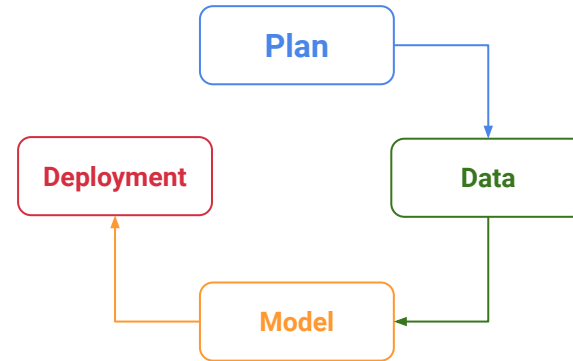
# Data Science Lifecycle

The lifecycle outlines the steps that successful data-science projects follow

Prof. Dr. Jan Kirenz  
HdM Stuttgart

# Data science includes ...

- Identifying promising use cases and creation of **plans**
- **Data** abilities
- Creation of **models**
- Understanding of **deployment** options

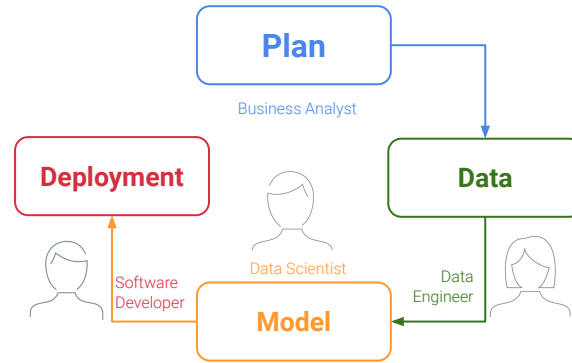


Lifecycle of an (machine  
learning) system

# Lifecycle

## of an ML System

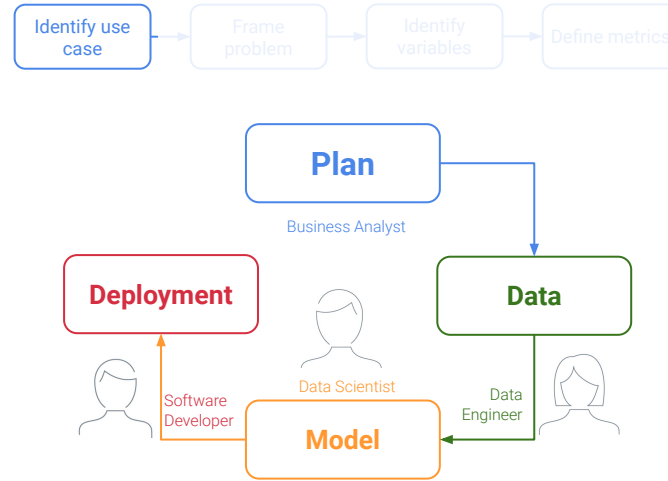
Plan | Data | Model | Deployment



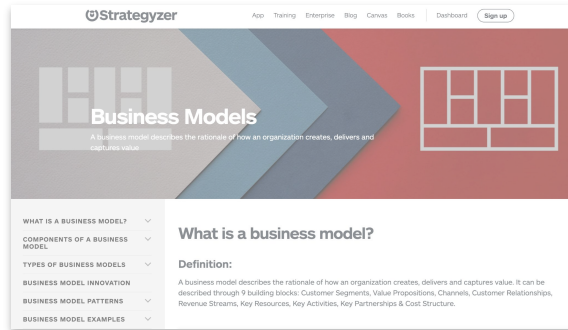
# Lifecycle

## of an ML System

Plan | Data | Model | Deployment



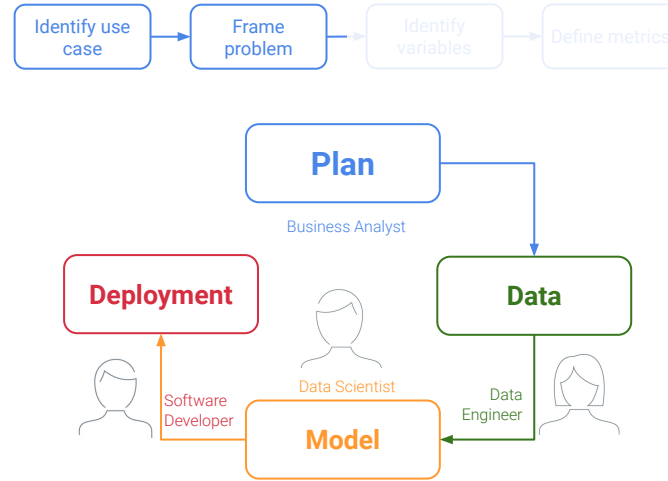
## Business Model Canvas



# Lifecycle

## of an ML System

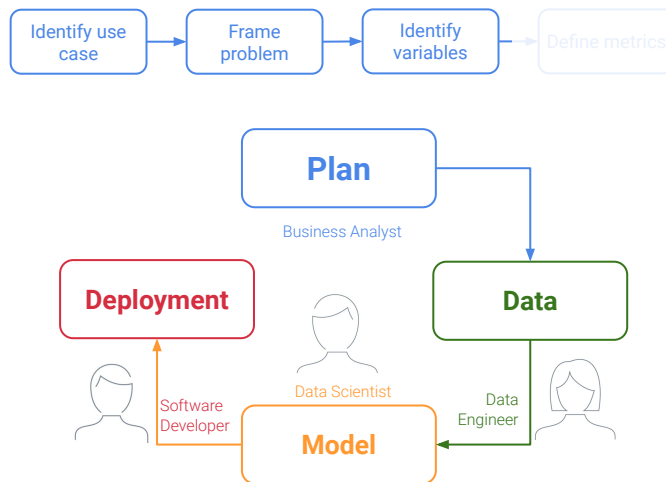
**Plan** | Data | Model | Deployment



# Lifecycle

## of an ML System

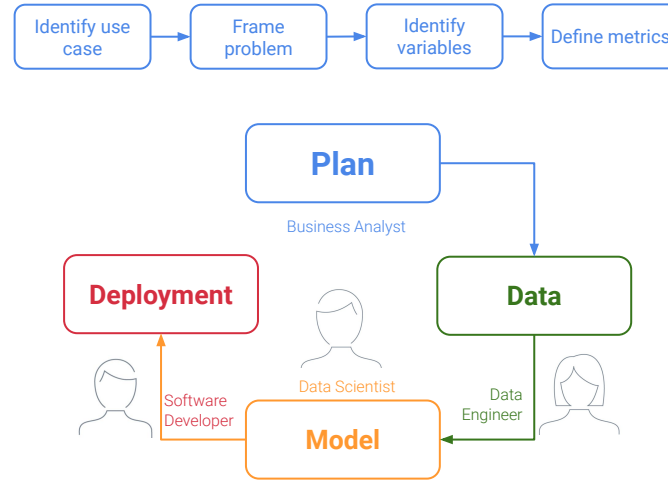
**Plan** | Data | Model | Deployment



# Lifecycle

## of an ML System

**Plan** | Data | Model | Deployment

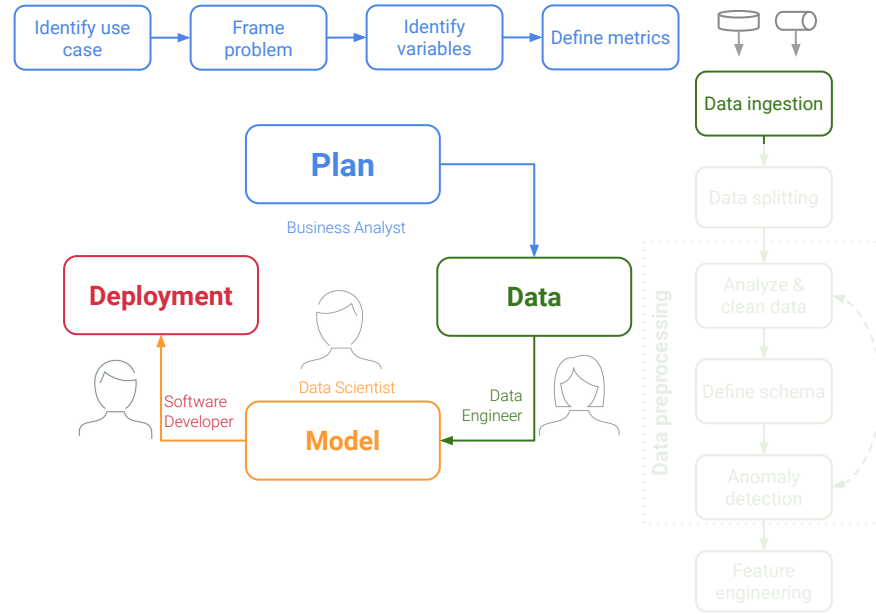




# Lifecycle

## of an ML System

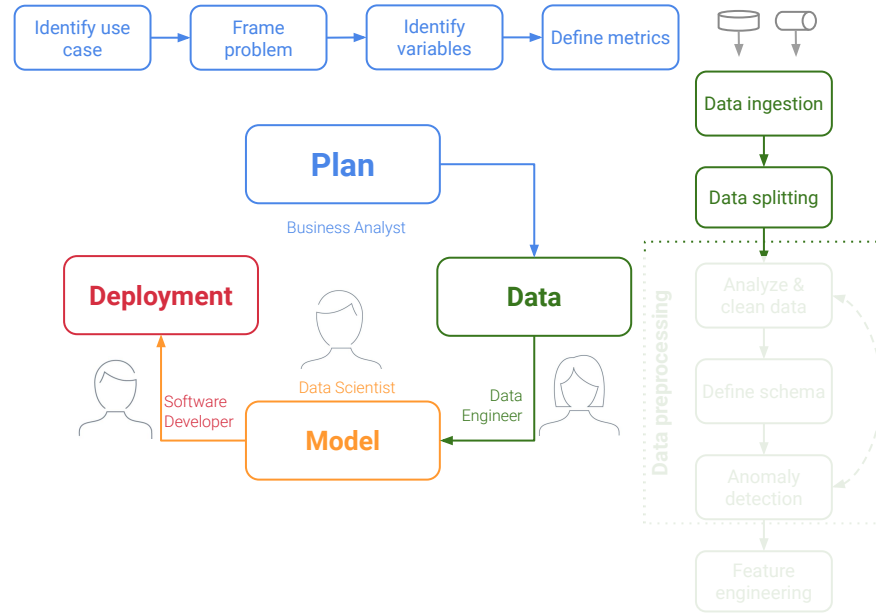
Plan | **Data** | Model | Deployment



# Lifecycle

## of an ML System

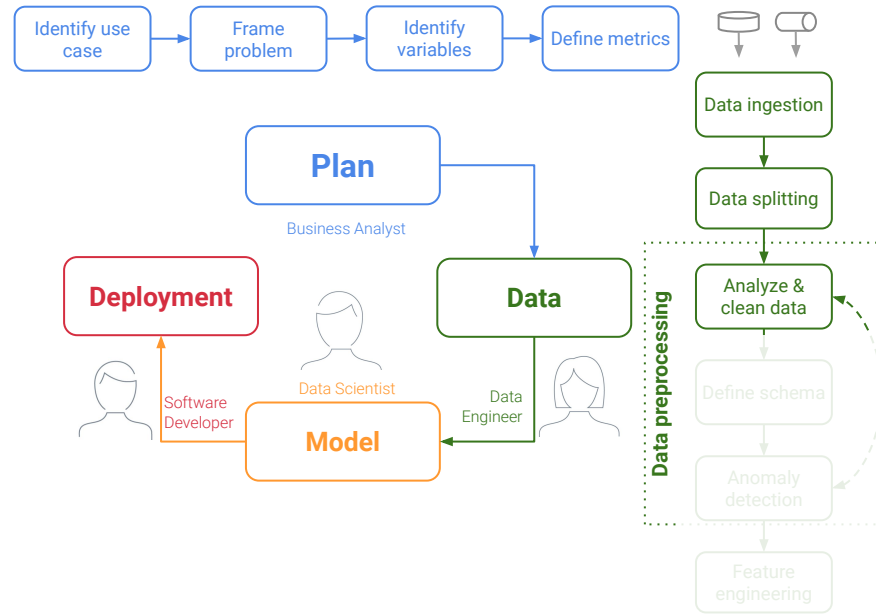
Plan | **Data** | Model | Deployment



# Lifecycle

## of an ML System

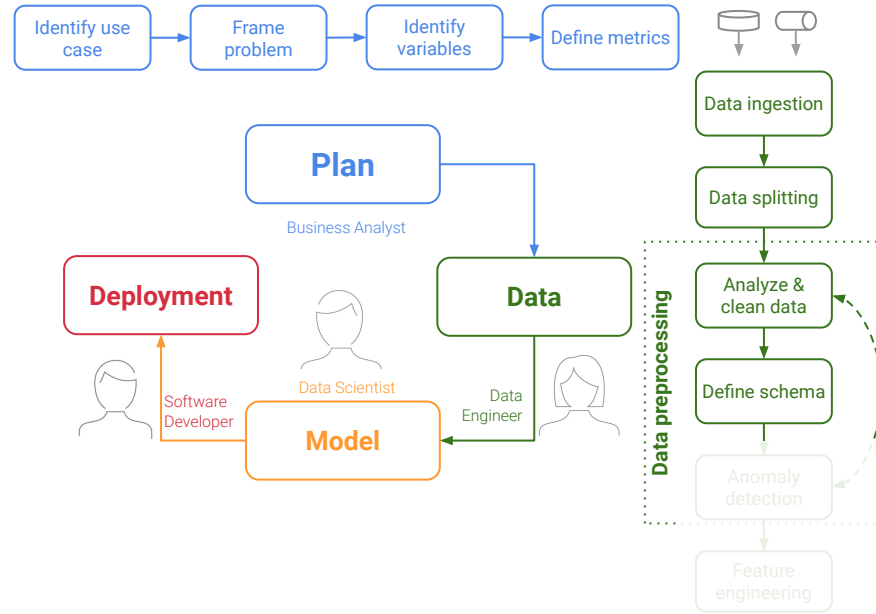
Plan | **Data** | Model | Deployment



# Lifecycle

## of an ML System

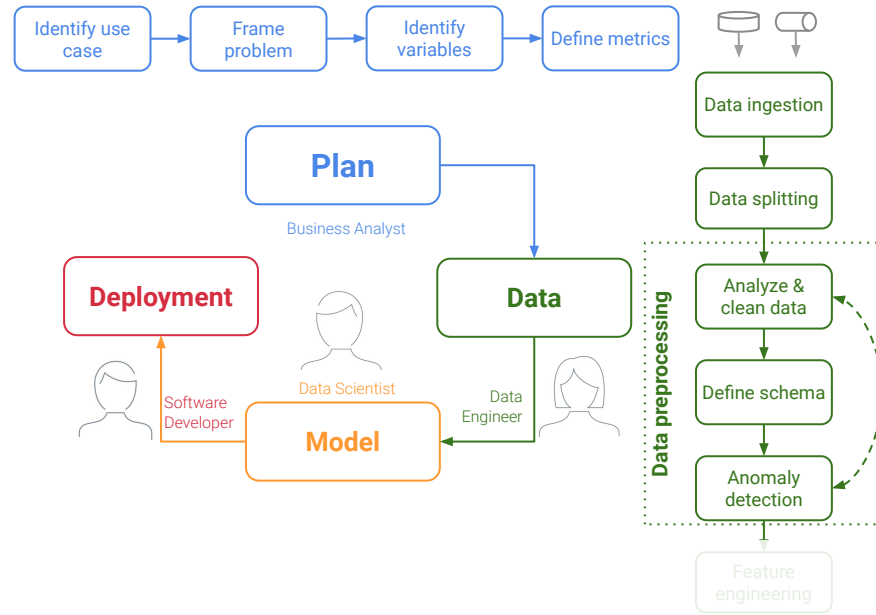
Plan | **Data** | Model | Deployment



# Lifecycle

## of an ML System

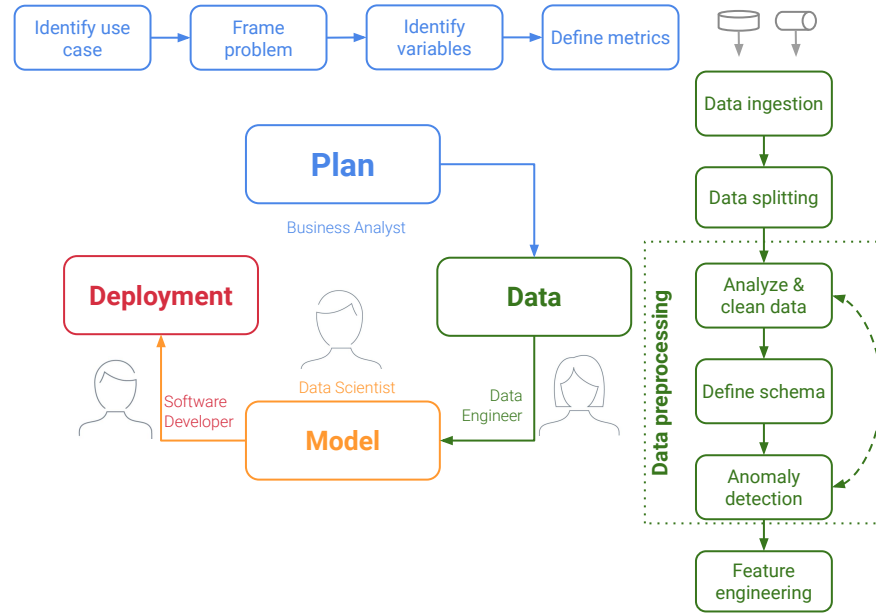
Plan | **Data** | Model | Deployment



# Lifecycle

## of an ML System

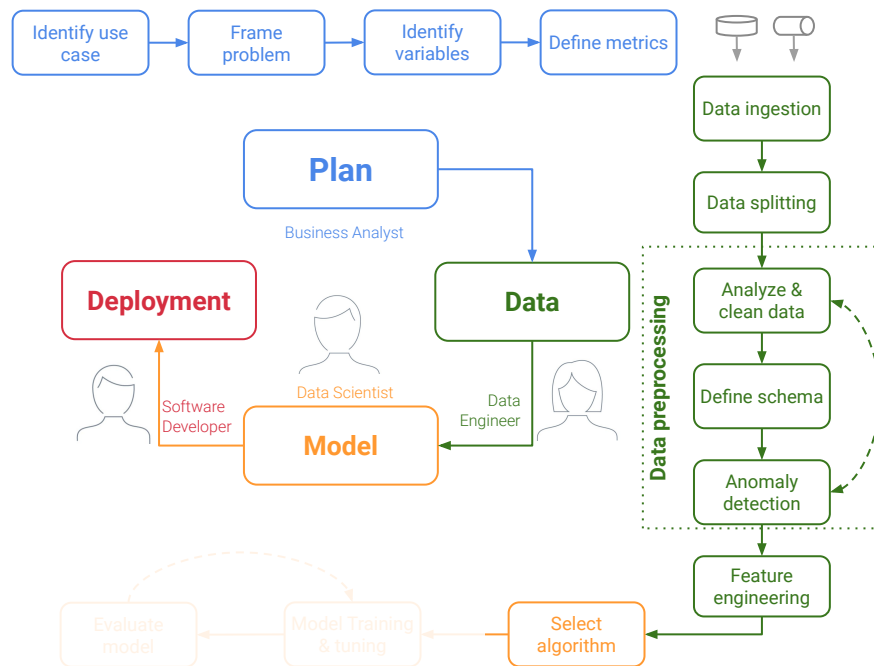
Plan | **Data** | Model | Deployment



# Lifecycle

## of an ML System

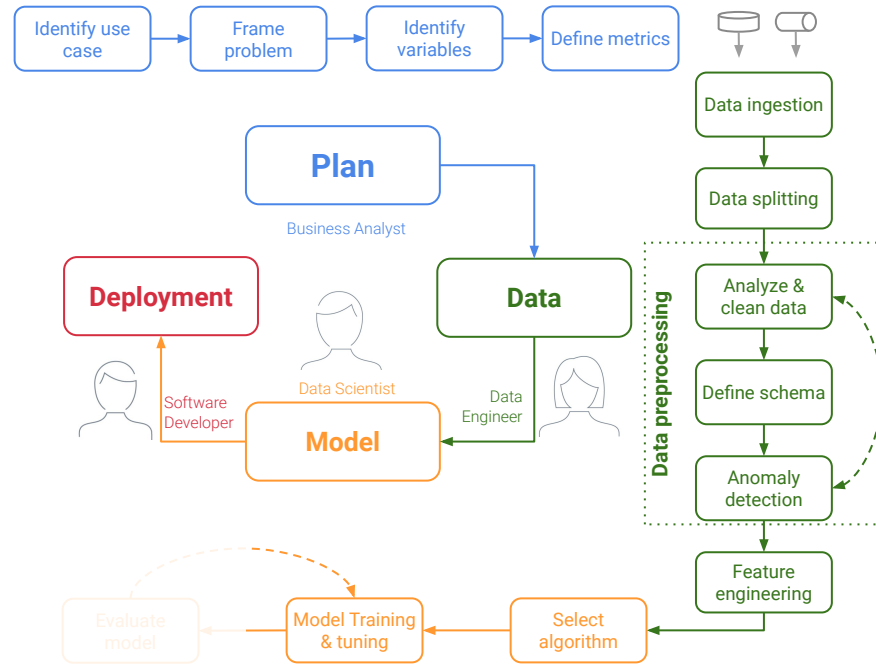
Plan | Data | **Model** | Deployment



# Lifecycle

## of an ML System

Plan | Data | **Model** | Deployment

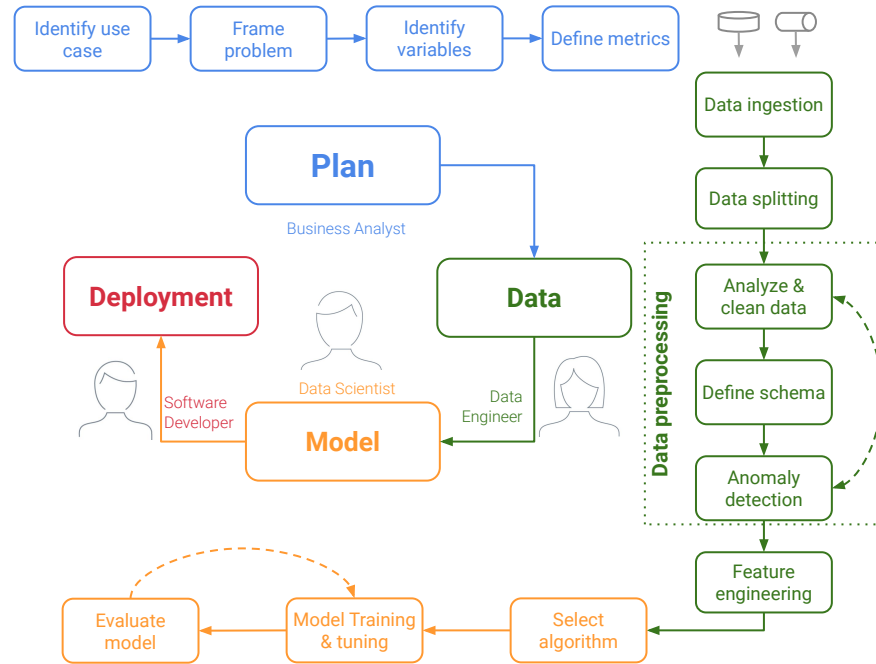




# Lifecycle

## of an ML System

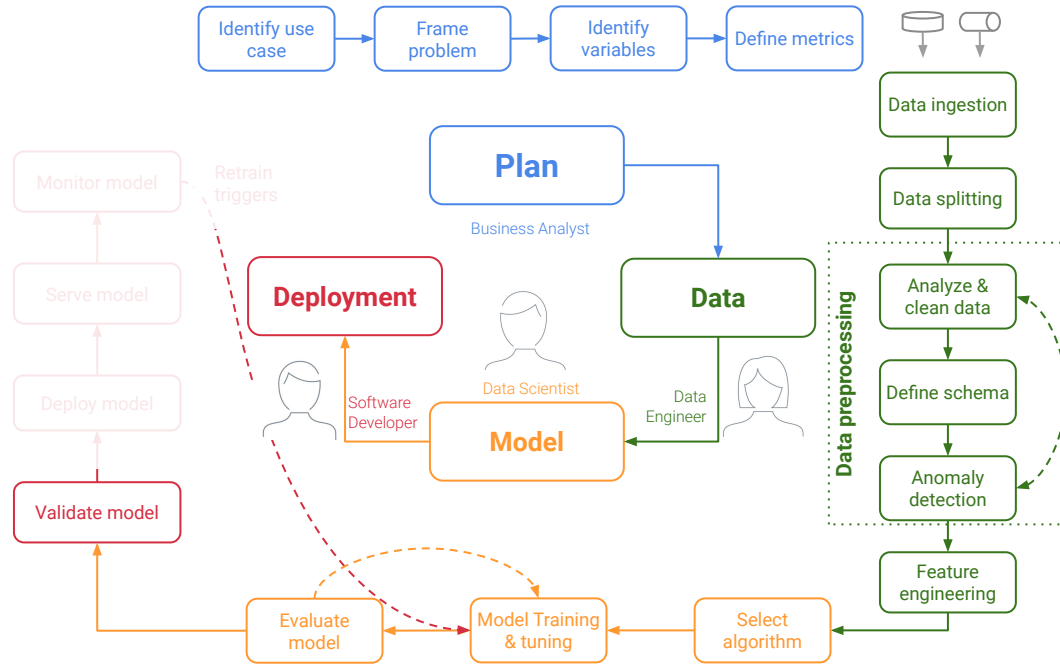
Plan | Data | **Model** | Deployment



# Lifecycle

## of an ML System

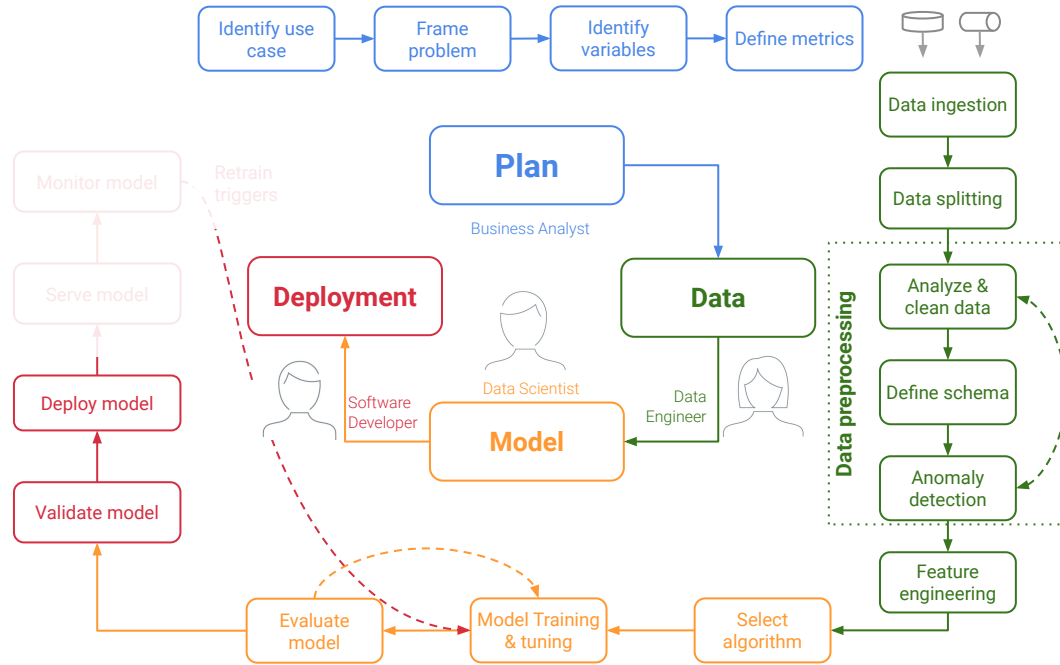
Plan | Data | Model | **Deployment**



# Lifecycle

## of an ML System

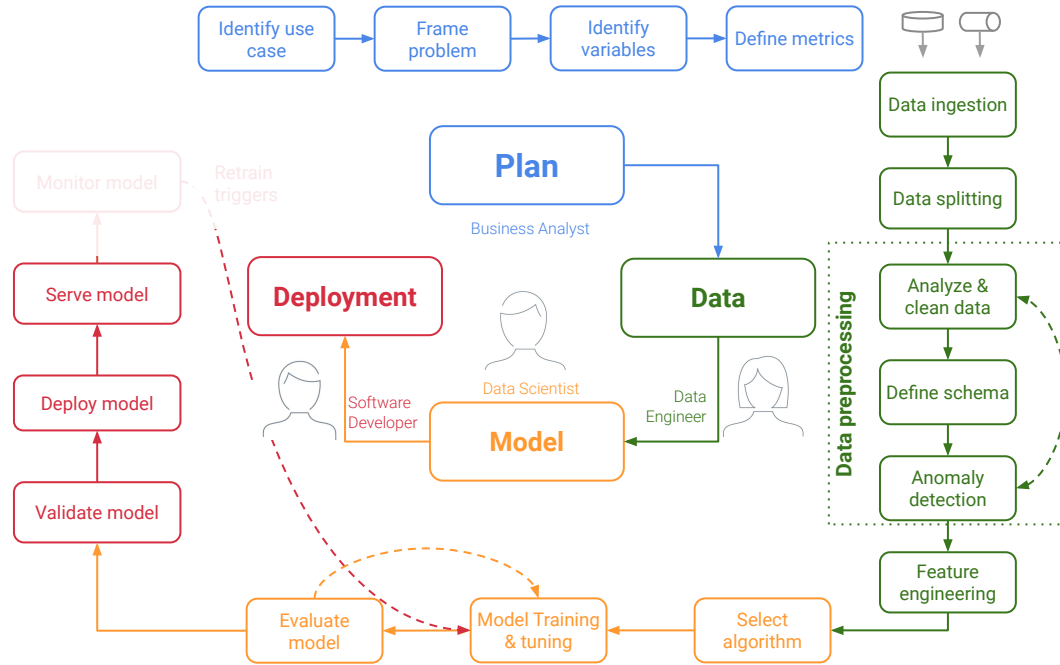
Plan | Data | Model | **Deployment**



# Lifecycle

## of an ML System

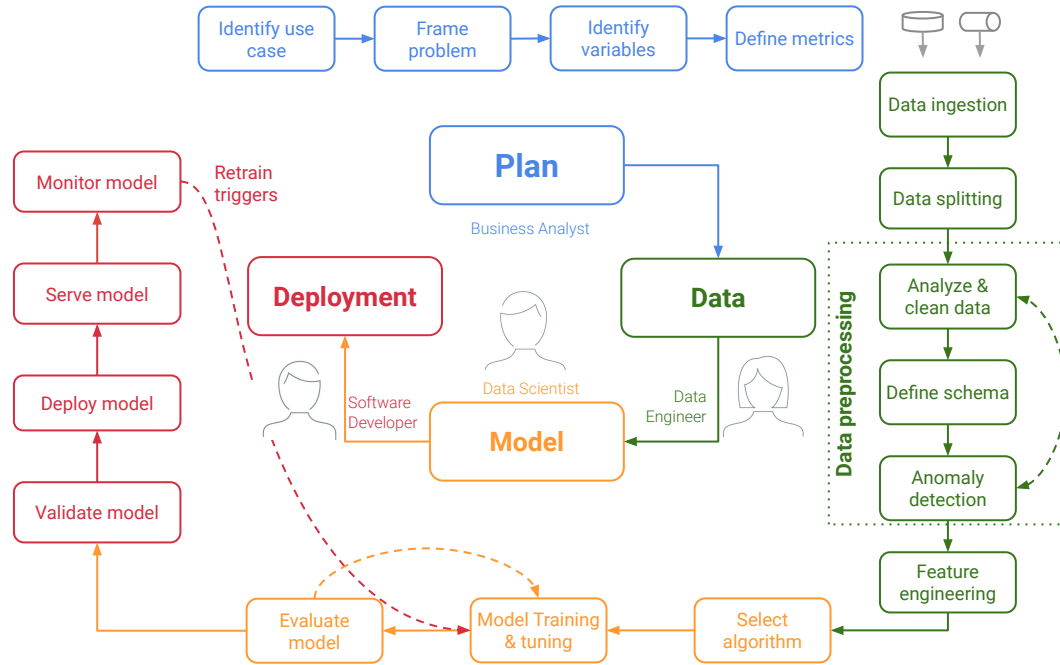
Plan | Data | Model | **Deployment**



# Lifecycle

## of an ML System

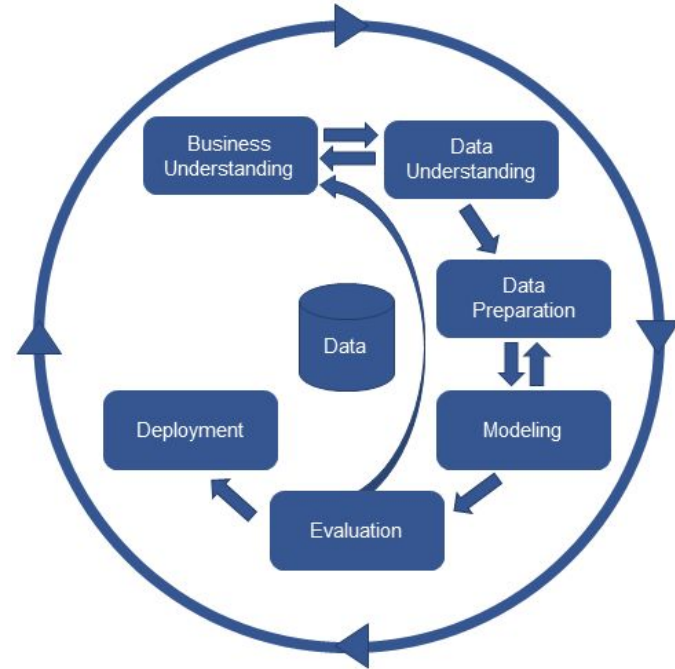
Plan | Data | Model | **Deployment**



# Backup: alternative lifecycles

# Cross industry standard process for data mining (CRISP-DM)

- 1) Business understanding
- 2) Data understanding
- 3) Data preparation
- 4) Modeling
- 5) Evaluation
- 6) Deployment



Source: Wirth & Hipp (2000)

# Data Science Lifecycle

