Assignment – Group Work

PREDICT
(HOW)

LEARN
(HOW)

Decisions:
How are predictions used to make decisions that provide the proposed value to the end user?

ML Tasks:
What is the input, and what is the output to predict ?
What type of ML task is used for the problem?

Value Propositions:
What are you trying to implement?
Why is it Important?
Who is using the system?
Who is benefited from the model?

GOAL
(WHAT, WHY, WHO)

Data Source:
Which raw data sources can we use?

Data Collection:
How do we get new data to learn from (inputs and outputs)?

Offline Evaluation:
Which methods and metrics can we use to evaluate predictions prior to deployment?

Features:
What are the features extracted from the raw data?

Building Models:
When do we create/update models with new training data, and how long do we have for that?

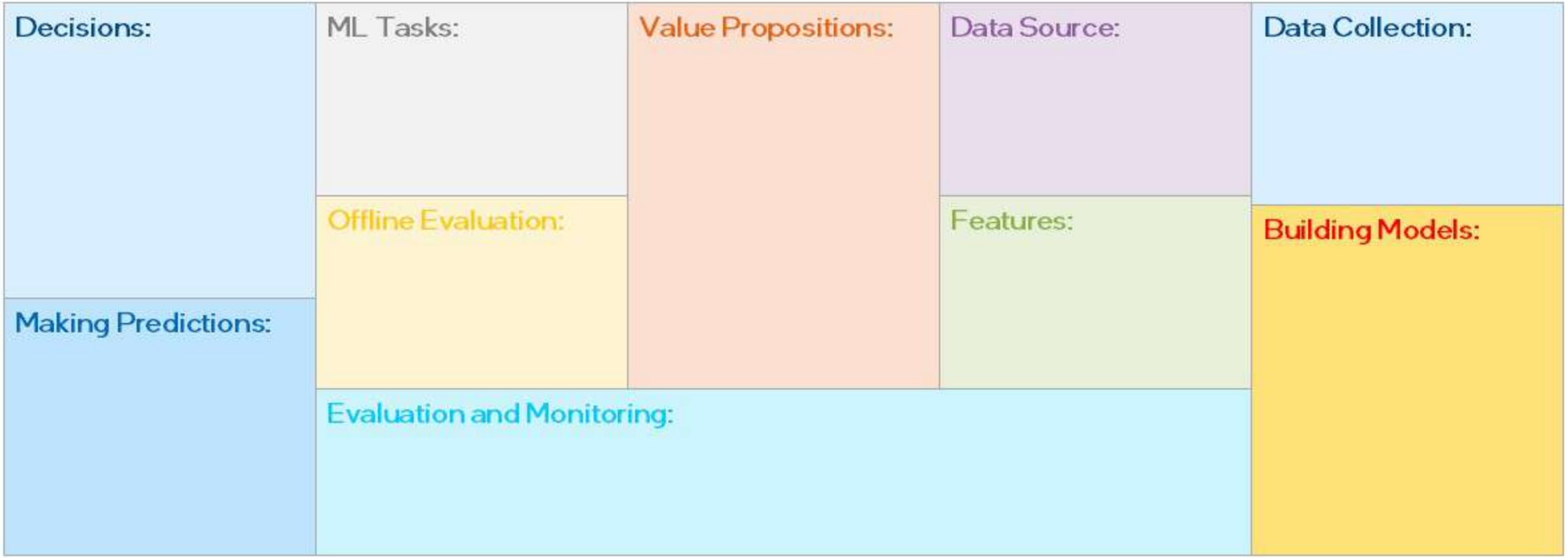
Making Predictions:
When do we make predictions on new inputs, and how long do we have for that?

Evaluation and Monitoring:
What are the methods and metrics used to evaluate the system after deployment ?.

EVALUATE
(HOW WELL)

Assignment – Group Work

Fill in the order
GOAL (Value Propositions) - LEARN (Data source, Data Collection, Features, and Building Models) – PREDICT (Decisions, ML model, Offline evaluations, and Making Predictions) – EVALUATE (Evaluation and Monitoring)



Assignment – Instructions and Grading

Decisions:
Every day begin sorting the machine parts based on its probability of getting damaged and see the prediction path for each.
Filter out the parts of the machine that are working fine.

Making Predictions:

Every month make predictions for each customer

ML Tasks:

Input – Sensor data
Output – Will/Won't get damaged
Task -Binary Classification

Offline Evaluation:

Evaluate the model on the predefined database

Value Propositions:

Identify the crucial machine parts which may not function properly.
Improve the efficiency of the manufacturing unit .

Data Source:

Sensor data,
Daily logbook of the machine maintenance

Features:

Basic machine parts information
Machine usage details

Data Collection:

Check the machine maintenance logbook to see which machine parts malfunctioned/worned out in the last month

Building Models:

Retrain the model every month on the previous month's data.

Evaluation and Monitoring:
Metric - Accuracy of the previous month's prediction.