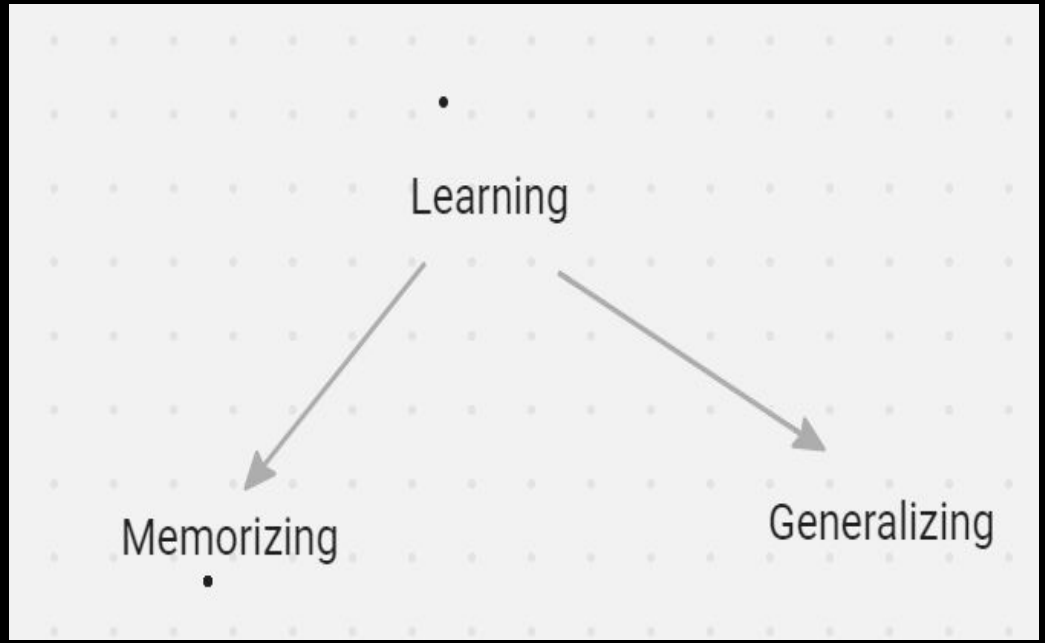
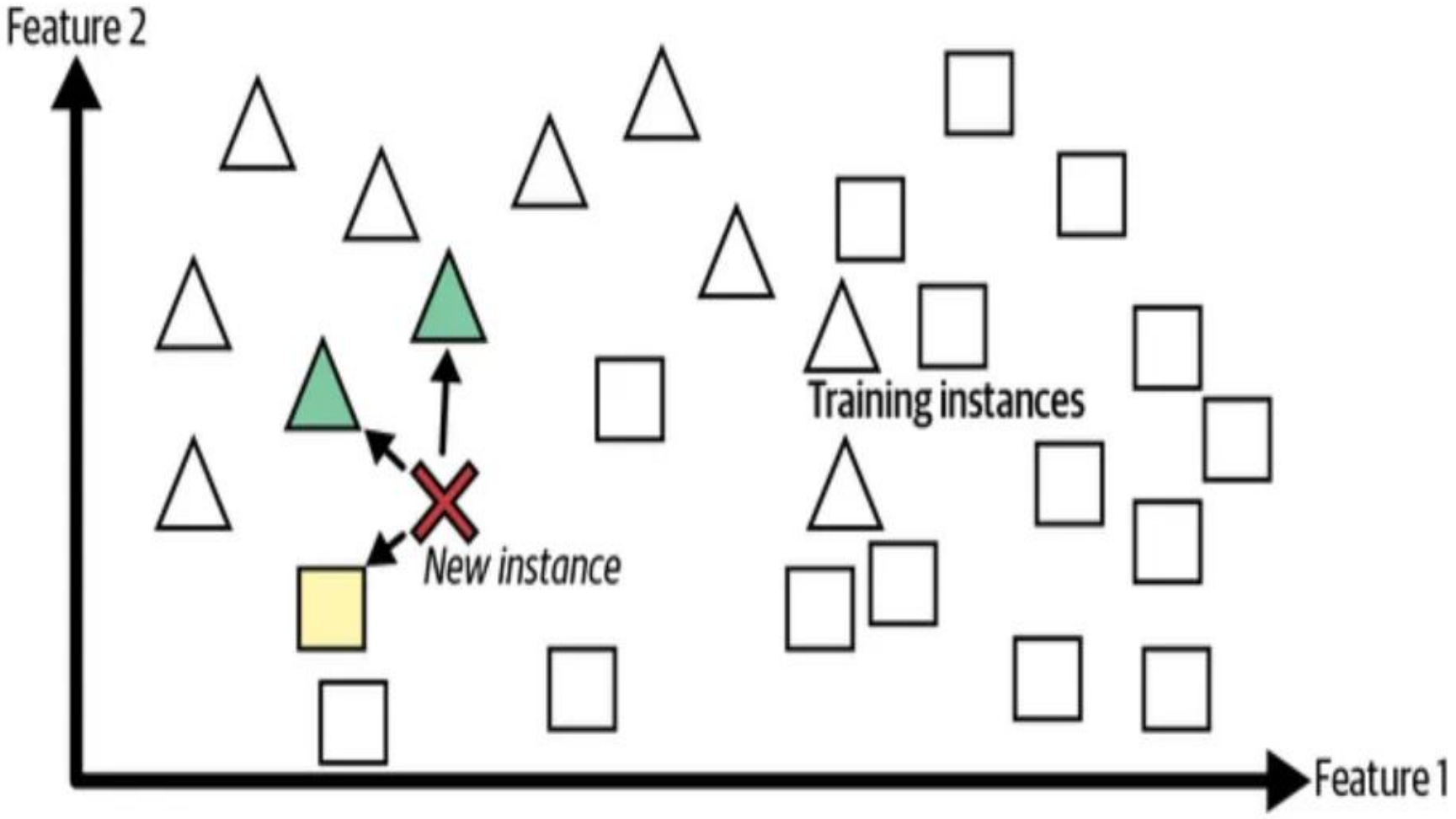
Instance-Based Learning vs Model-Based :-



Instance-Based Learning

- It is using the entire dataset to make predictions.
- The machine learns by storing all instances of data and then using these instances to make predictions on new data. The machine compares the new data to the instances it has seen before and uses the closest match to make a prediction.
- no model is created.
- the machine stores all of the training data and uses this data to make predictions based on new data.


Feature 2
Training instances
New instance
Feature 1

Model-based learning :-

System learns to make predictions or decisions based on a model of the environment or data it interacts with. Essentially, instead of directly learning from raw data, the system builds a representation (model) of how the data behaves or how tasks can be performed. This model is then used to make predictions or decisions about new data it hasn't seen before. It's like learning the rules or patterns from examples so that you can apply them to similar situations in the future.