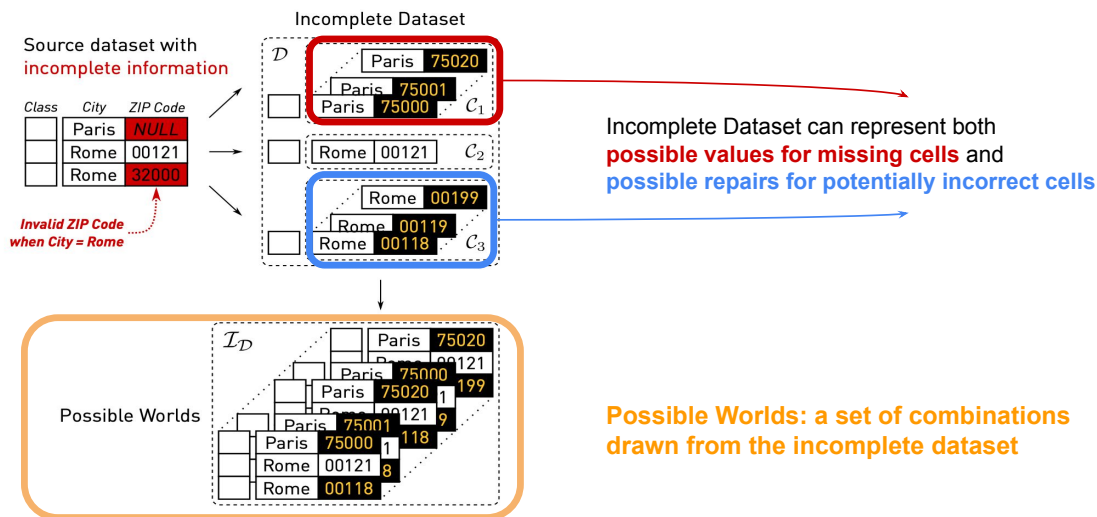
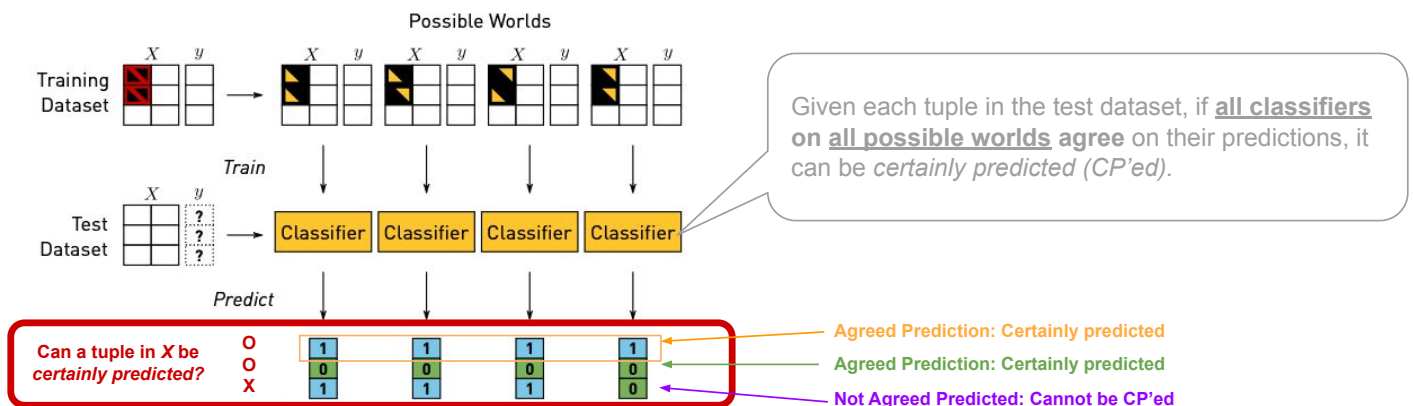


## Theoretical Framework of Certain Predictions



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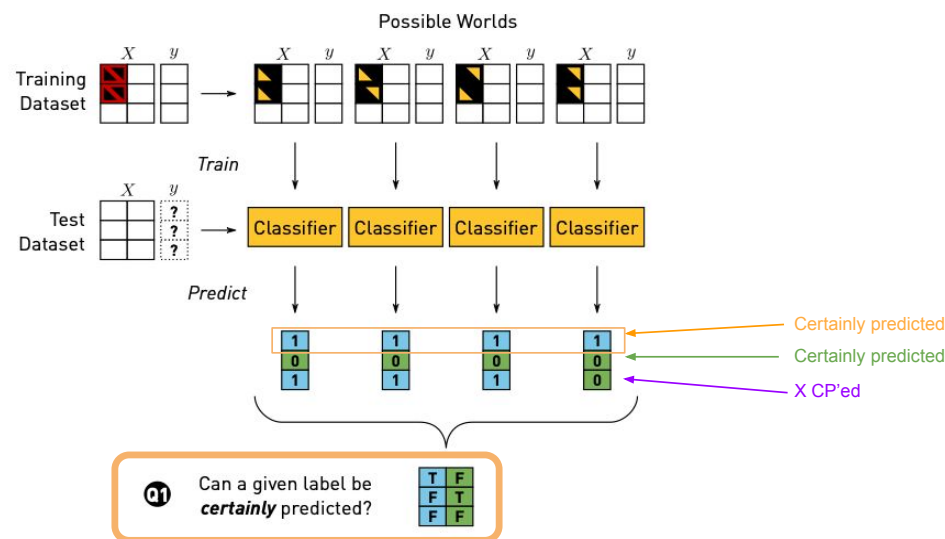
## Semantics of Certain Predictions (CP)



A test data example can be “certainly predicted” if *all possible classifiers* trained on top of *all possible worlds* induced by the incompleteness of data would yield the *same* prediction.

# Semantics of Q1: Decision Problem

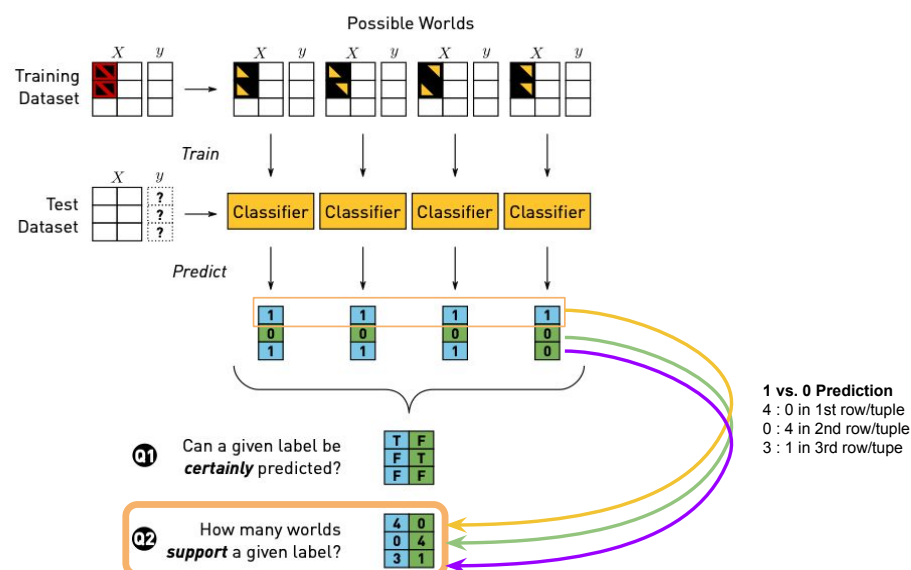
Q1: “**Decision Problem**” checks if a given label can be **certainly** predicted in all possible worlds.



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# Semantics of Q2: Counting Problem

Q2: “**Counting Problem**” returns the number of possible worlds that support each prediction.



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