Instance Based Learning Vs Model Based Learning

```
┌─────────────┐
│  Use Case   │
└─────────────┘
       │
       ▼
┌─────────────┐                    ──→ Regression
│  ML Model   │──────┤
└─────────────┘                    ──→ Classification
       │
```

Learning Pattern

```
       ┌──────────────────────────────┐
       ▼                              ▼
   Instance                      Model Based
    Based
       │                              │
       ▼                              ▼
     Data                           Data
       │                              │
       ▼                              ▼
                                   Pattern
```
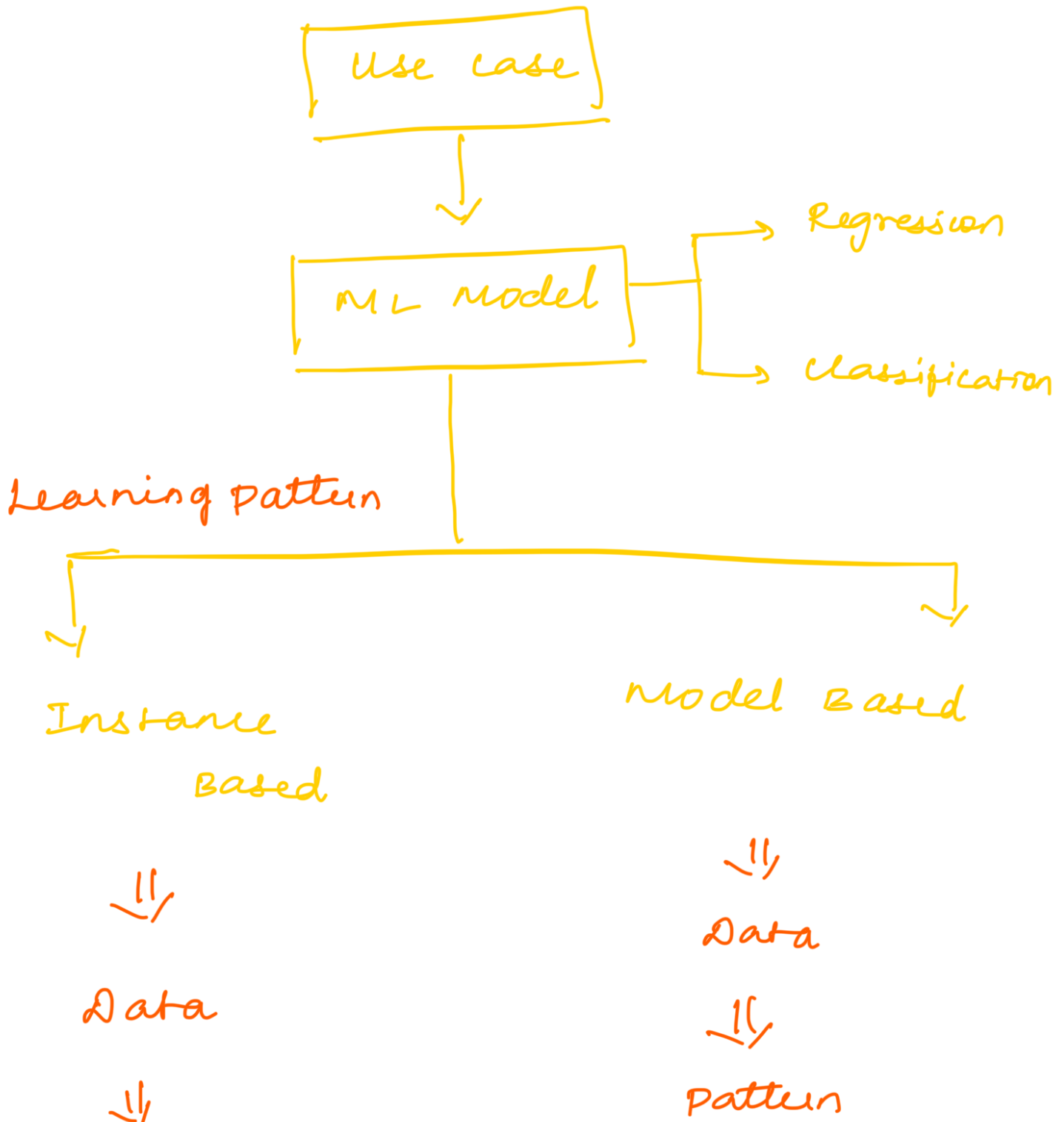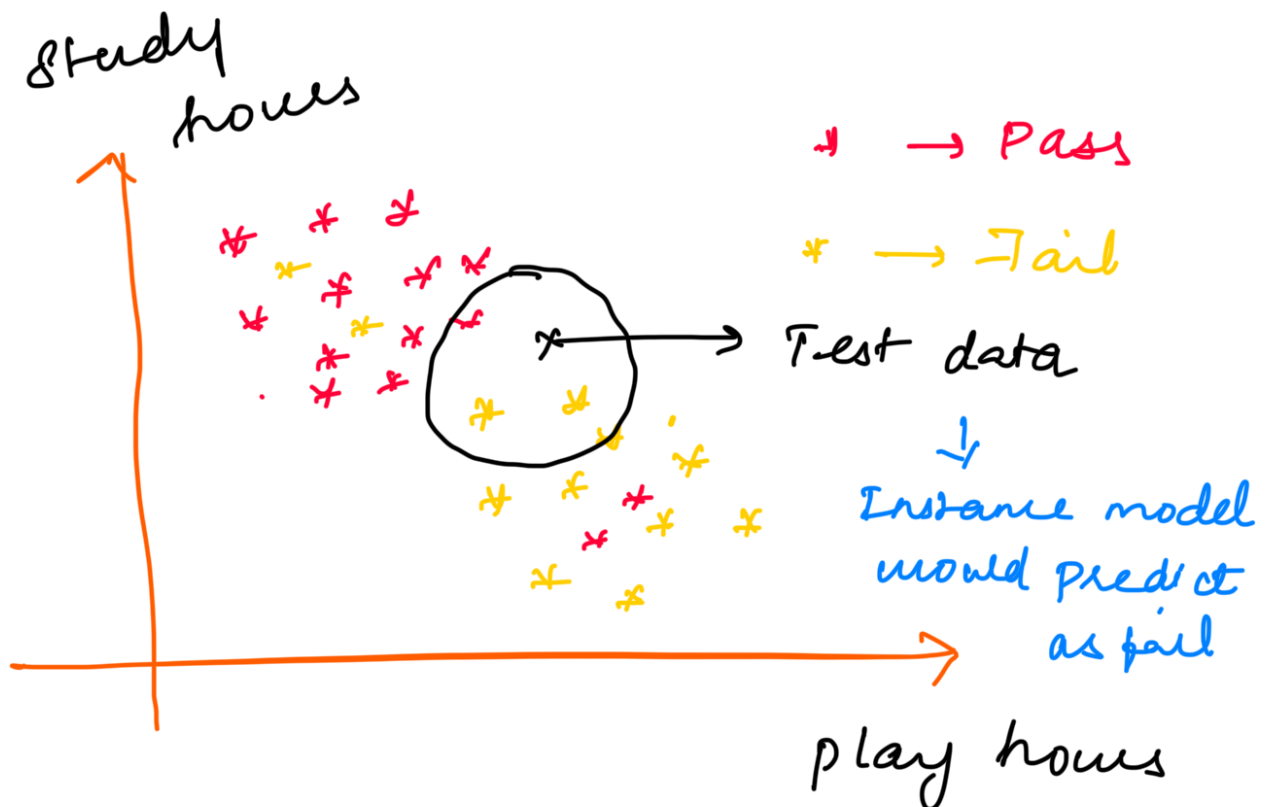
output

Generalization
pattern

No of play	No of study	Pass / fail

Study hours

↗ → Pass

* → Fail

→ Test data

↓
Instance model would predict as fail

play hours

Instance Based Learning

$\downarrow \downarrow$

Domain Experts

anything above the curve consider as pass

Decision Bounding

$\{$ Generalized model

anything below the curve consider as Fail

$\downarrow \downarrow$
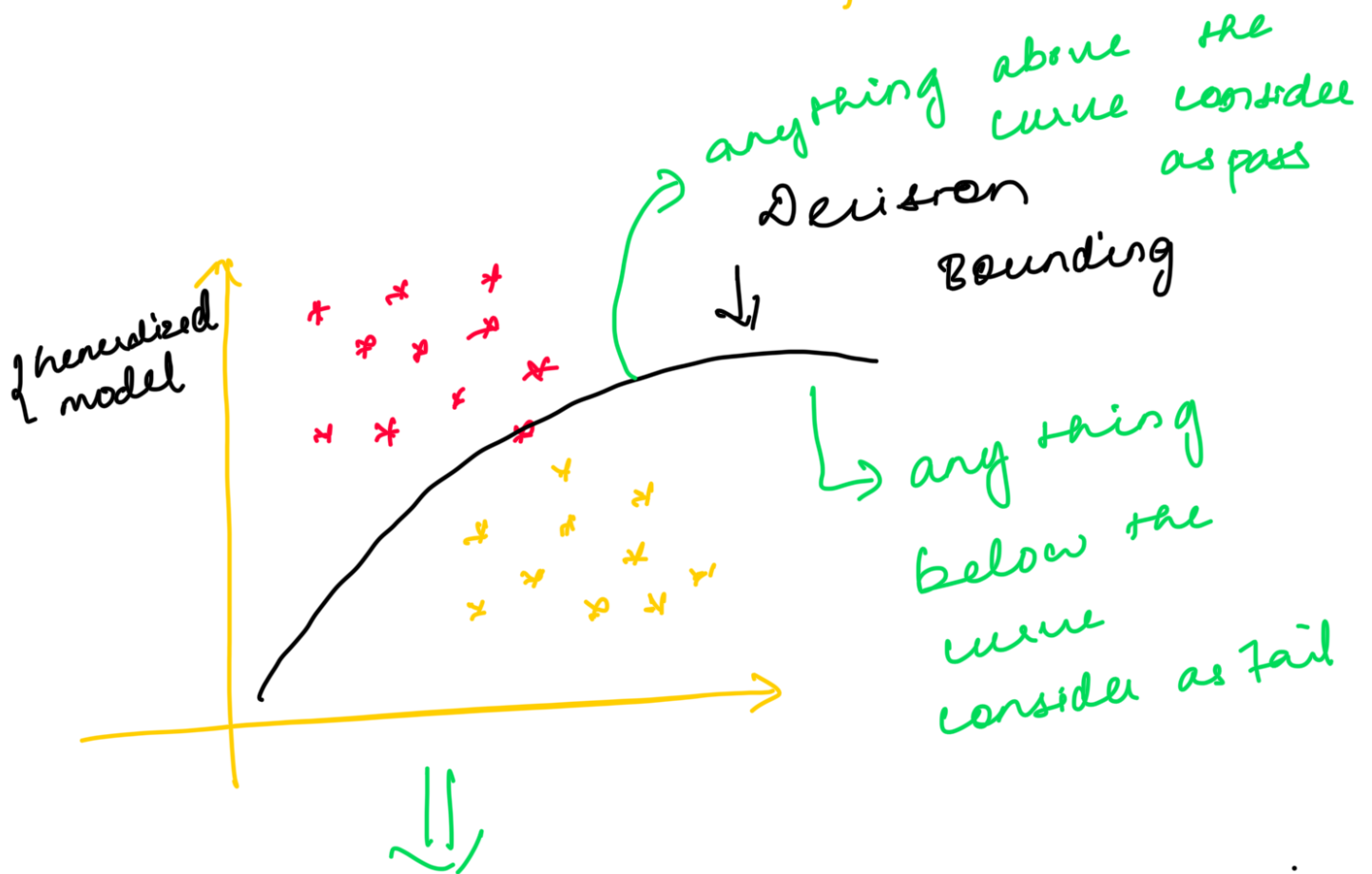
Model based Learning gives the genualized format.

In the instance based Learning Model memorize the data,

where as is model based learn the pattern of the data.