

What it covers:

- **Sequence diagrams** show interactions between objects over time.
- Key parts:
 - Lifelines (actors or objects).
 - Messages (method calls, signals, returns).
 - Activation bars (when an object is “active”).

Why it matters:

- Ideal for capturing **dynamic behavior**:
 - User interactions with a system.
 - API call sequences.
 - Data flows in machine learning pipelines.
- Helps:
 - Visualize scenarios for testing.
 - Identify complex interdependencies.
 - Communicate precise requirements for developers.
- For AI:
 - Can depict data collection, preprocessing, model inference steps.