

# Event Driven State Machine Lab

BME554L - Fall 2025 - Palmeri

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## Wireless Heart Rate Monitor State Diagram

- Generate a state diagram for a wristwatch-based heart rate monitor that sends “instantaneous” heart rate data to a smartphone.
  - I would recommend doing this with pencil and paper first, not immediately jumping into a tool.
  - Err on the side of more detail than not.
- Make sure that your state diagram:
  - Has start and termination dots.
  - Includes all functional states, including (but not limited to):
    - \* `Init`
    - \* `Idle`
    - \* `Measuring`
    - \* `Transmitting`
    - \* `Error`
  - Consider if states should have entry and exit actions.
  - Make sure all transitions between states are annotated with associated triggering events.

## Generate the State Diagram

- Formally render your state diagram using either:
  - [PlantUML](#) (the tool shown in lecture)
  - [Mermaid](#)
  - [draw.io](#)
  - [Lucidchart](#)

## Gradescope

- Upload your rendered state diagram to the associated Gradescope assignment.