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.