Conflict Handling for Autonomic System
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Motivation
- Lots of different sensors available
- Can provide possibly contradictory information
- Need to handle this contradictory information and the resulting conflicting actions
- EHealth applications mainly focus on one sensor

Objectives
1) Adapt and train Hidden Markov Models to analyse the data coming from different sensors.
2) Use the analysis from the Hidden Markov Models in combination with a rule based system in order to:
   - Detect conflicting information or actions
   - Resolve the conflicts detected
   - Use past data and decisions in order to avoid conflicts before they happen.

Proposed Structure
- Filters
- Anhythmia Detection
- Blood Pressure Analysis
- Diagnosis

Preliminary Tests
- Tests done on ECG leads from the MGH/MF Waveform Database
- 3 types of heartbeats: Normal, Supraventricular and Ventricular
- Early Results: Good Recall but also High FP rate

Existing Work
- Rule-based system developed by my supervisor [1]
- An application for wearable devices helping with the rehabilitation of cardiac patients [2]

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References