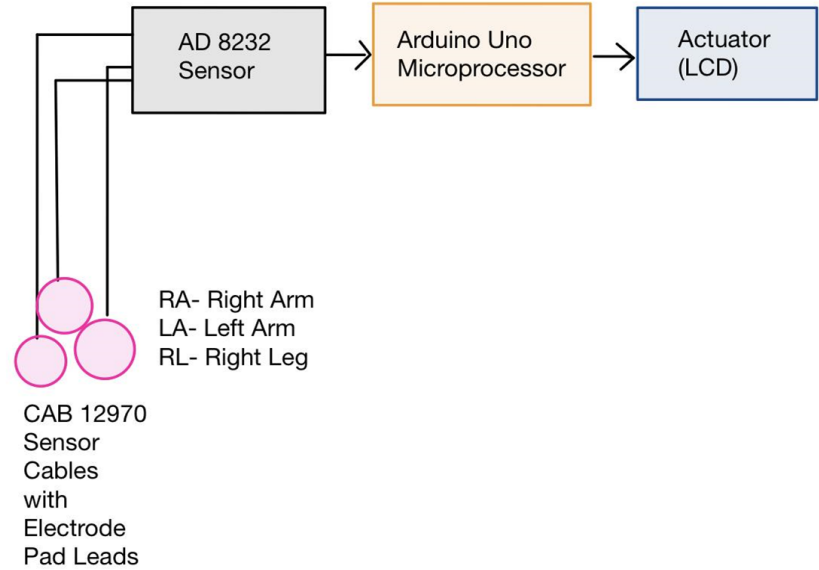
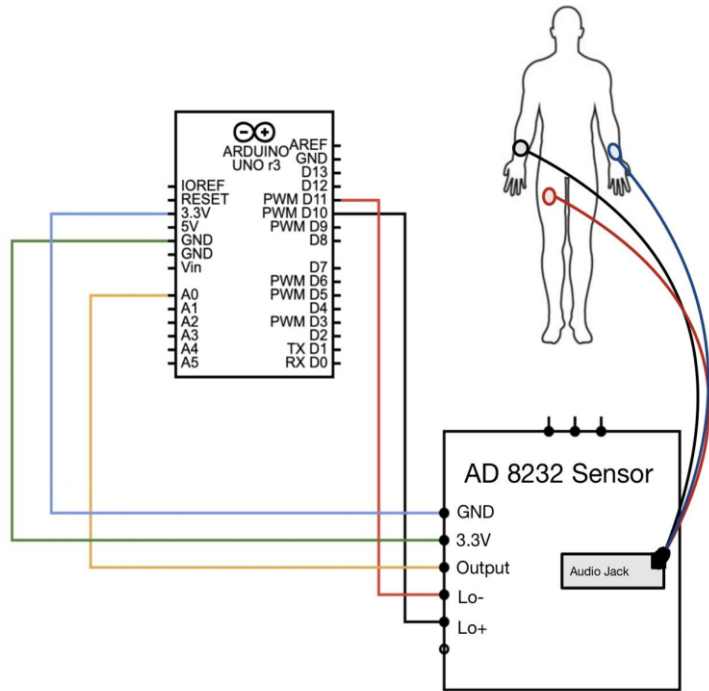




Stress Detecting EKG with Arduino

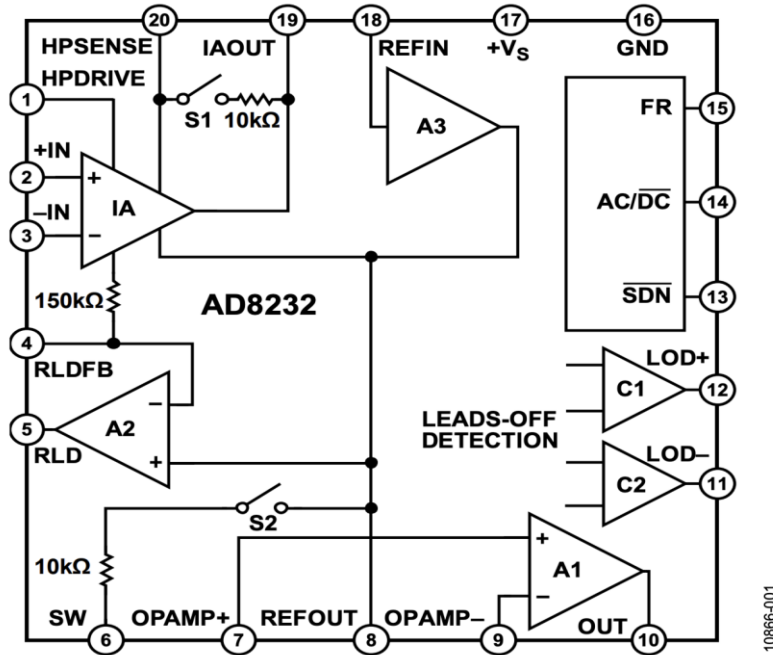
Jeevi Scarozza





AD 8232-Integrated signal conditioning block

Additional Parts



10866-001

Arduino Uno

CAB-12970- Sensor Cable

Electrode Pads (3 connector)

Electrodes (biomedical grade)

LCD Display

Breadboard

Figure 2: Analog Devices. "Single-Lead, Heart Rate Monitor Front End. AD8232 Sensor".

Plan of Implementation

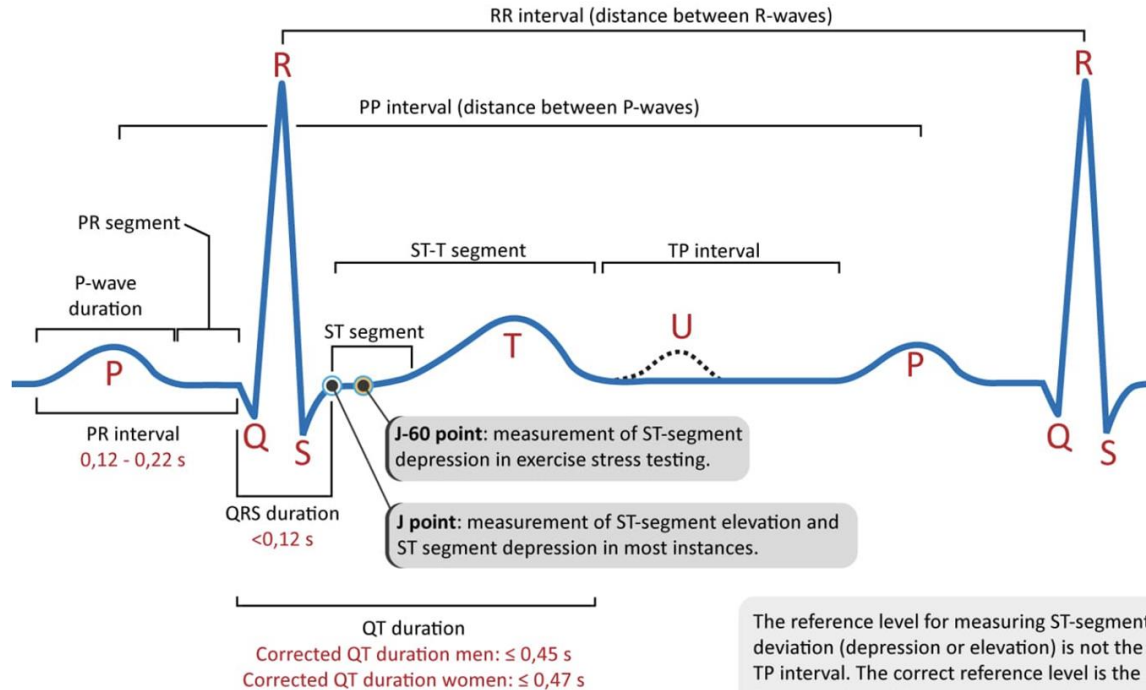
Week 1: Building circuit, ensuring everything works properly and all necessary components are obtained. Writing setup code to transfer interpret reading in Arduino IDE. Learning how to read peaks.

Week 2: Writing code to analyze the heart rate on the serial monitor and calculate RR time interval. Determine how to convert from time interval to BPM.

Week 3: Implementing code to convert the users RR time to BMP. Work on connecting to LCD display.

Week 4: Coding alert on LCD display. Troubleshooting, testing circuit on myself during different time periods to test whether LCD display can properly display an alert when the users heart rate is elevated.

Interpreting an ECG Wave

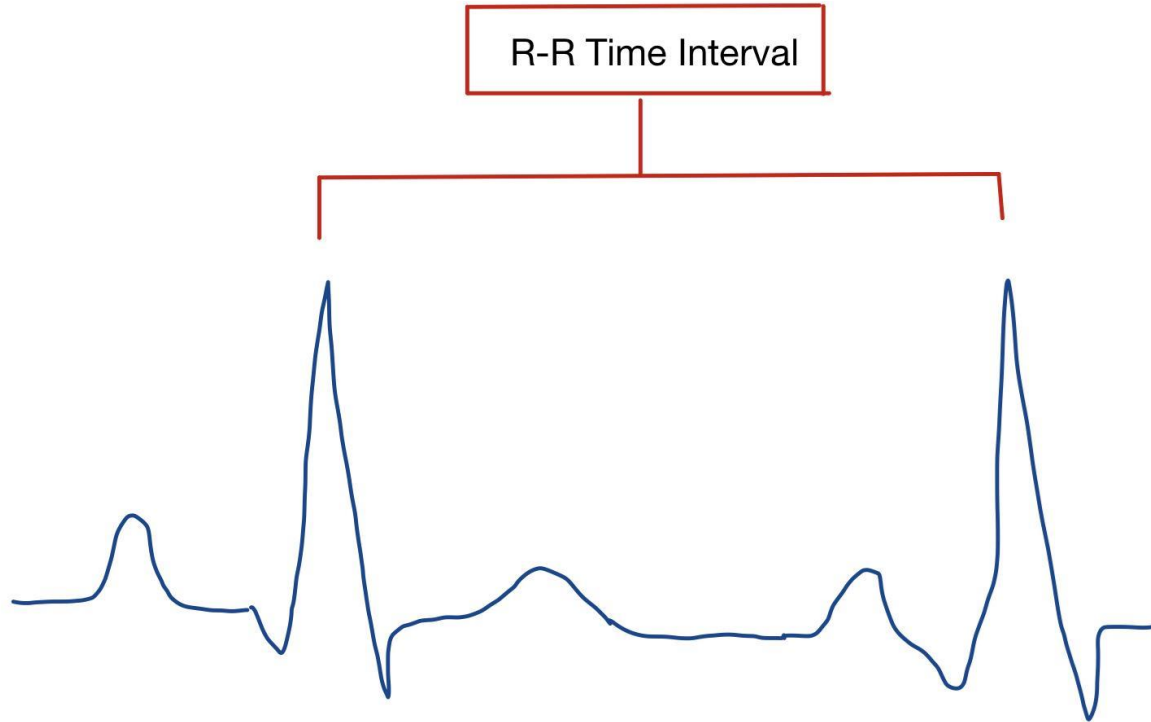


The reference level for measuring ST-segment deviation (depression or elevation) is not the TP interval. The correct reference level is the **PR segment**. This level is also called **baseline level** or **isoelectric level**.

Interpretation of the ECG Wave.

<https://ecgwaves.com/topic/ecg-normal-p-wave-qrs-complex-st-segment-t-wave-j-point>

What I will be focusing on to calculate beats per minute:



Data from Serial Plotter: Peak that reaches above 400 is R peak

