

# ML Project 2 Report

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## 1 Discussion of the 12th of November

Be careful with the units of the elastance

- Brachial SBP (Systolic blood pressure), highest pressure value within a cardiac cycle
- Brachial DBP (Diastolic blood pressure), lowest pressure value within a cardiac cycle
- Brachial PP (Pulse Pressure), relevant marker for cardiovascular disease MAP (Mean arterial pressure)
- Carotid to femoral PWV (Pulse wave velocity)
- Stroke volume, blood volume ejected for a cardiac cycle
- Ejection fraction, stroke volume divided by the the max volume of the left ventricle
- Central SBP (Systolic blood pressure)
- End-systolic elastance, property of the artery at the end of the blood ejection
- End-diastolic elastance, property of the artery before blood ejection

Note : Compliance =  $dV/dP$  while elastance =  $dP/dV$

First try to reproduce the results using the Scipy library Questions:

- how were the data acquired ? ex: patterning of the data for the ejection duration, is it relevant ?
- waveform data, acquisition ?
- stratification of the samples according to the max or min values of their radial BP (ex: some have max at 70 other at close to 100)
- normalisation of the data (ex: computation of the slope of the waveform)
- synchronisation of the waveform with respect to beginning of the slope or max of the peak ?