# Project Problem

Improve weightlifting abilities based on the analysis of a given persons lifts, quantativity.

# Project Scope

* Skeletal tracking of people
* UI comparison of current versus “Good” lift
  + Minimum we need to tell you if a lift has improved
  + Slowed down playback
* Identify and show features
  + Pause when feature
    - Foot off ground
    - Foot on ground
    - Catch (before the Jerk)
* Playback of lifts
* Side and frontal profiles are both shown
  + These must be synced
  + These must be scrubbed simultaneously
* Measuring, Bar and person acceleration and jerk, Form (joint angles), positioning (start and end, if not total motion)
  + Monotonic acceleration
* Signal out bar tracking, and show data such as acceleration
* Snapshot specific such as angles between joins
  + Specify get frame of min knee angle
  + Stress points
* Compare good as in a form that a coach puts in
* Defined tolerances in the form for okay, bad, good
* Highlight improvements
* Add bad lift checks
  + Elbow on knee contact
  + Fail and warn on cranium com
* Tag footage
* Playback of video (load)
* Playback must be synced with new record
* Filter objects (see only person and bar)
* Bar tracking playback
  + See if you follow the line
* Graph parts of the lift
* Playback is play until common point of lift
  + Play until sync point when comparing lifts

# Problems

- Requires kin people? - Welcome them and see if there is interest!i