

NOTE:

This code requires 3D scan data of a fully extended arm, the joints of the 3D scan data, race, gender and BMI.

Instructions to run the code for the framework:

1. Copy all of the folders in the '*... \The framework*' to '*... \MATLAB7\work*'.
2. Store the 3D scan data and its joint file in : '*... \ MATLAB7\work*' .
3. Open and run: *main_cs_sampling_and_deformation_area.m* to match the template and sample five key cross sections as well as profile of the 3D scan data.
4. Open and run: *main_cross_secs_prediction.m* to predict the five key cross sections at 135°, 90° and maximum flexion.
5. Open and run: *KNN_profile_version_3_gender_race.m* to generate the profiles at 135°, 90° and maximum flexion.
6. Open and run: *CS_refinement.m* to refine the orientation of the five key cross sections at 135°, 90° and maximum flexion.
7. Open and run: *Profile_any_posture_version_2.m* to create the profile for the required arm angle.
8. Open and run: *Main_interpolation_ver_2.m* to create the coordinates that were required to create flesh deformation at the required postures
9. To visualise the result, use the following coordinates that are displayed on Matlab:
 - coordinates_UAF
 - coordinates_UAM
 - additional_CS_1
 - additional_CS_2
 - coordinates_E
 - additional_CS_3
 - additional_CS_4
 - coordinates_LAM
 - coordinates_LAF