Data Dictionary: (Left and Right Knee All Phases)

Field Name on Data Page	Field Definition	Unit	Variable type
Foot	Left or Right Foot	N/A	Categorical
Phase	Seven phases at which roofers perform a typical shingle installation task. P1 indicates 'reaching for shingles', P2 indicates 'placing shingles', P3 indicates 'grasping the nail gun', P4 indicates 'moving to the first nailing position', P5 indicates 'nailing shingles', P6 indicates 'replacing the nail gun', and P7 indicates 'returning to upright position'.	N/A	Categorical
Slope	Roof slope. It indicates the slope of the roof at which the roofers operated the shingle installation. Value was assigned for each slope as 0 for 0°, 15 for 15° and 30 for 30°.	Degree (Deg)	Categorical
Intervention	Intervention (NO, BO, KP, KS). A coded value was assigned for each intervention. 1 was for NO, 2 was for BO, 3 was for KP, and 4 was for KS.	N/A	Categorical
Max Flexion	Maximum flexion angle. It indicates the rotation angle of the lower leg about the medio-lateral axis that runs from left to right of the leg through the knee joint. The maximum value was taken from time series data.	Degree (deg)	Numerical

Max Abduction	Maximum abduction angle. It indicates the rotation angle of lower leg with respect to the anterior-posterior axis that runs from the front to back of the leg through the knee joint. Abduction is rotating away from the axis. (+) values indicate abduction.	Degree (deg)	Numerical
Max Adduction	Maximum adduction angle. It indicates the rotation angle of lower leg concerning the anterior-posterior axis that runs from the front to the back of the leg through the knee joint. Adduction is rotation towards the axis. (-) values indicate adduction.	Degree (deg)	Numerical
Max Internal Rotation	Maximum internal rotation angle. The rotation angle of knee joint about the longitudinal axis that passes vertically along the leg in upright standing position. (+) values indicate internal rotation.	Degree (deg)	Numerical
Max External Rotation	Maximum external rotation angle. The rotation angle of knee joint about the longitudinal axis that passes vertically along the leg in upright standing position. (-) values indicate external rotation.	Degree (deg)	Numerical

Note: "*N/A*" in any cell under Fields *Max Flexion*, *Max Abduction*, *Max Adduction*, *Max Internal Rotation*, *Max External Rotation* indicates a missing value in that cell.