Tutorial 2 – Data Preprocessing

The NMSM Pipeline expects input data to be in a specific format for the tools to work properly. The data preprocessing sub-tool focuses on processing raw kinematic, force, and EMG data into a usable format.

Data preprocessing is the next step in the pipeline after JMP, and is required to proceed with MTP, NCP, and GCP.

The inputs to data preprocessing are experimental IK motions, ID loads, ground reaction forces and moments, geometric muscle data, and EMG data. The tool then crops and filters the relevant quantities for the NMSM Pipeline tools to run.

**Data preparation:**

1. Open the OpenSim model “UF\_Subject\_3\_reduced\_muscles.osim” in the OpenSim GUI.
2. Run the Inverse Kinematics tools on the model using the marker file “GaitTrial\_markers\_jmp.trc**”**
   1. Make the output motion file name “GaitTrial\_IKResults.mot”