Get more comfortable with all that Inspect3D has to offer by working through the following tutorials.

Contents

Tutorial Data Files

Inspect3D's tutorials use real data sets wherever possible in order to demonstrate realistic scenarios and avoid overly simplistic examples. Download links to the tutorial datasets can be found here.

Getting Started

Working through these four tutorials will provide you with an overview of how Inspect3D lets you analyse your motion capture data sets from start to finish.

- **Tutorial 1: Load signals into Inspect3D and view them**
- **Tutorial 2: Clean your data**
- **Tutorial 3: Perform Principal Component Analysis**
- **Tutorial 4: Export your results**

Principal Component Analysis

PCA is a key analytical feature in Inspect3D, allowing you to represent complex biomechanicals waveforms in low-dimensional spaces while maintaining most of the waveforms' information. These tutorials will provide you with an overview of how to perform PCA in Inspect3D and of your options for follow-on analysis.

- **Perform Principal Component Analysis**: This tutorial provides an overview of performing PCA. This tutorial is the same as the PCA tutorial in the “Getting Started” section.
- **Run K-Means**: This tutorial shows how you can use the k-means algorithms to cluster the results of PCA analysis.

Public Data Sets

Exploring publicly available data with Inspect3D is a great way to understand the original paper, learn about Inspect3D's features, and get ideas for your own work.

- **Healthy Human Walking**: This tutorial shows how you can use Visual3D and Inspect3D to clean datasets and create publication-ready figures.

- **Treadmill Walking In Healthy Individuals**: This tutorial shows how you can use Visual3D and Inspect3D to automate the processing of large-scale data sets.
- **OpenBiomechanics Project: Build CMZs Files**: This tutorial shows how you can combine .c3d files and metadata into CMZ files for analysis in Inspect3D.
- **OpenBiomechanics Project: Refine Queries with Metadata**: A discussion of how metadata can be used to help you refine queries.
- **Analysis of Baseball Hitters at Different Levels of Competition**: This tutorial shows how you can use Inspect3D to automate the processing of large-scale data sets, and how metadata can be used to help you refine queries.