Mujosign: Documentation-First Project Report

Version 1.0

A detailed documentation-first report consolidating the design, implementation, and evolution of Mujosign.

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## 1. Problem Definition and Goals

Mujosign is a documentation-first research project bridging gesture specs and MyoSuite muscle activations.

## 2. Repository Structure

The repo contains docs/, gestures/, configs/, scripts/, src/mujosign/, tests/, and tools/.

## 3. Scripts Overview

- run\_single.py: Run a single optimization and write artifacts.

- render\_pose.py: Re-render saved runs for thumbnails or inspection.

- view\_run.py: Open GUI viewer for interactive replay.

## 4. Evolution Path

Started with schema validation, then joint/muscle mappings, fastpath solver, artifact writing, replay and viewer scripts.

## 5. Next Steps

Add RL-based solvers, better rendering, and improved scoring gates.