

# **3D Joint-based Physiotherapy System for Stroke Rehabilitation with Automatic Assessment and Feedback using Kinect**

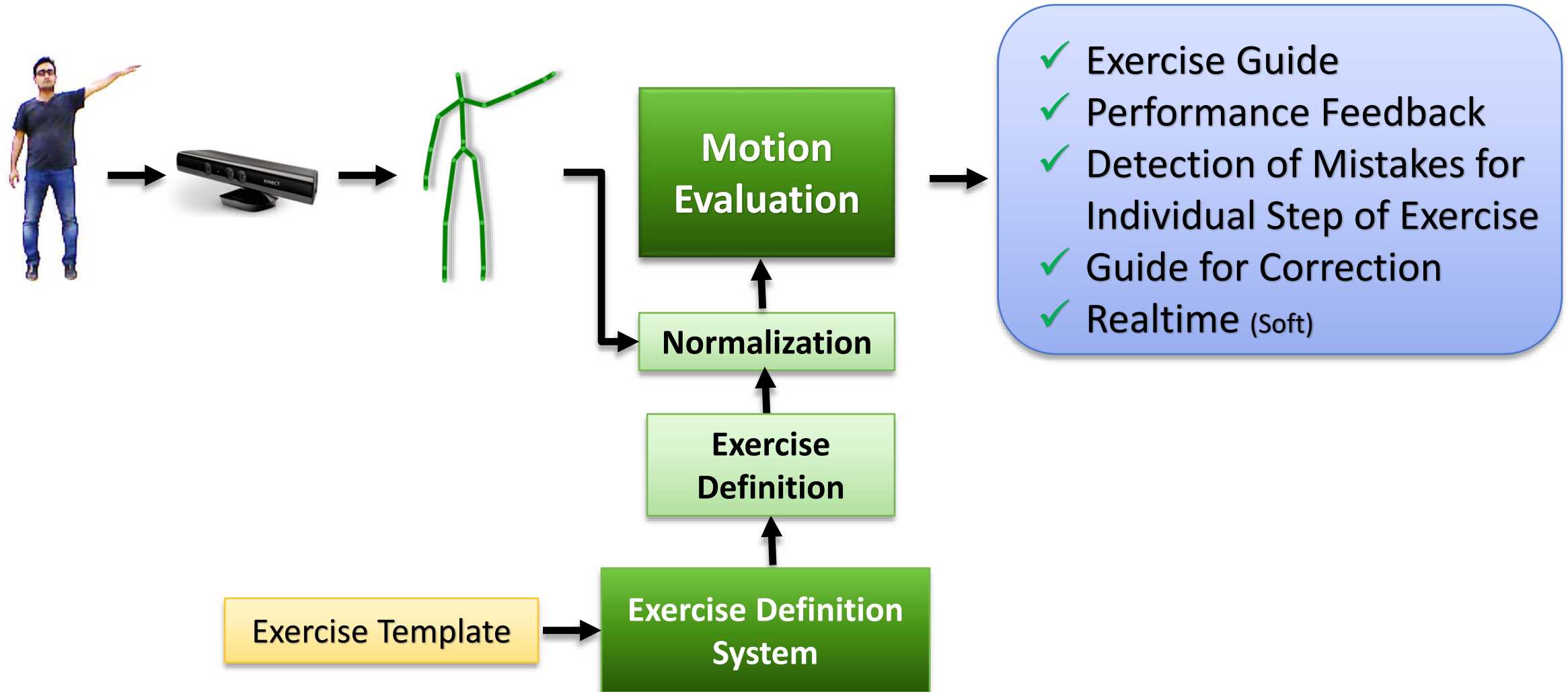
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**Hafiz Muhammad Ahsan Shehzad**

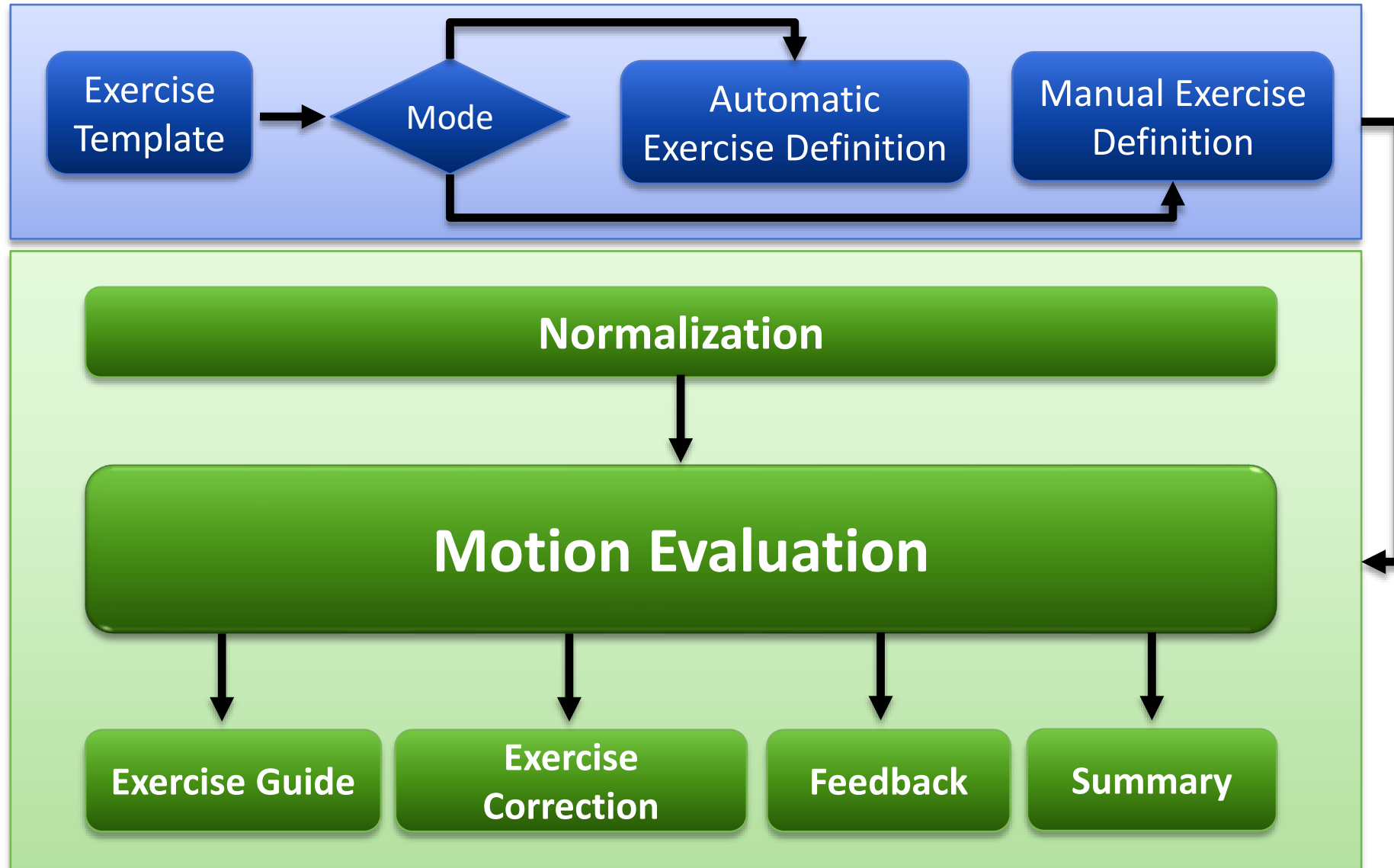
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# Framework of our Physiotherapy System



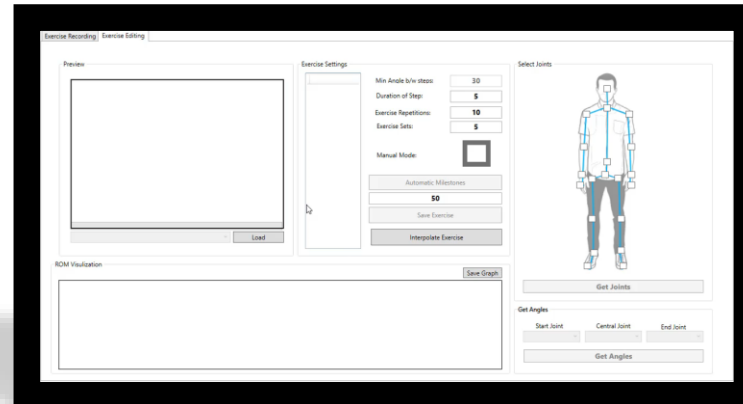
# Hybrid Framework for Rehabilitation Exercise



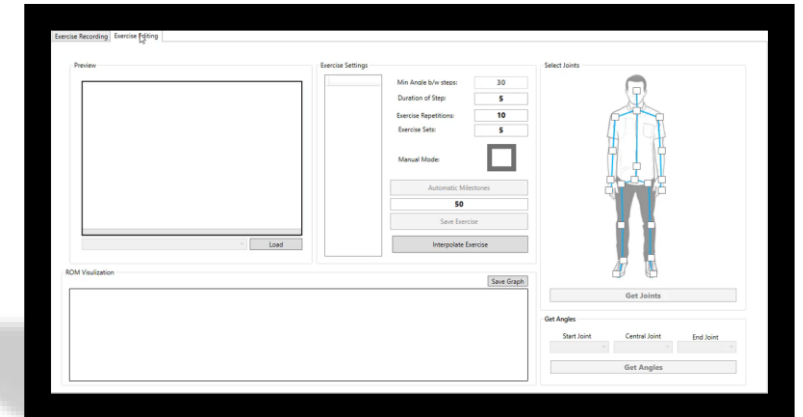
# Experimental Results (Exercise Definition)



Exercise Template  
Recording



Automatic Exercise  
Definition (AED)

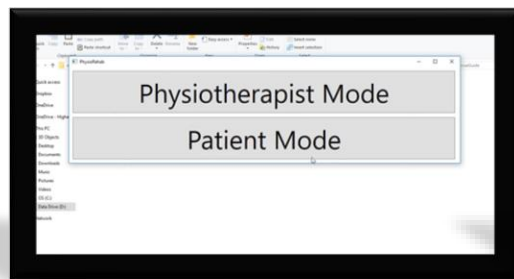


Manual Exercise  
Definition (MED)

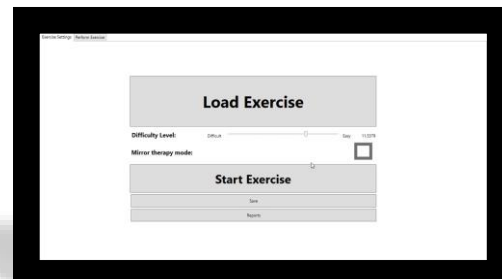
# Experimental Results (Exercise Evaluation)

## Outcomes

- Exercise Guide
- Exercise Analysis
- Exercise Correction
- Automatic ROM calculator
- Exercise Counters
- Neurological Recovery
- Realtime Feedback
- Summary



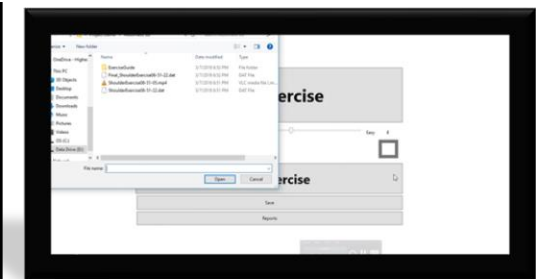
Demo:  
Location Normalization



Demo:  
MED, Different Body Size



Demo:  
AED, Different Body Size



Demo:  
Mirror Therapy

# Thank You