Artificial Muscle Signal Generation using Generative Adversarial Networks
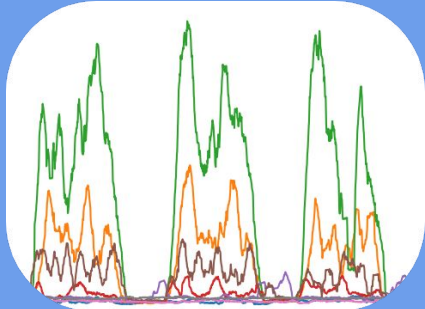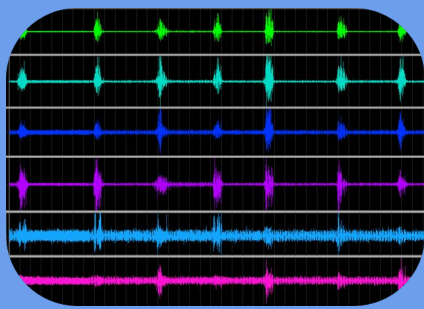
Objectives
- 3D Game development in Oculus Quest
- EMG data collection from 10 different subjects
- GAN network training and hyper-parameter tuning
- Artificial EMG signal generation using GAN

Data processing
- Baseline subtraction
- Finding possible outliers
- Band-pass filtering 10-500 Hz
- Notch 50 Hz filtering
- Full wave rectification
- Root mean square
- Data normalization

GAN Network development
- CNN Generator
- LSTM-CNN Generator
- CNN Discriminator