MACQUARIE
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# Progress Report

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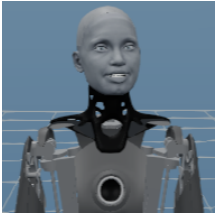
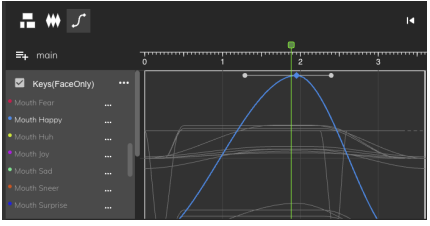
# Work completed in the past two weeks

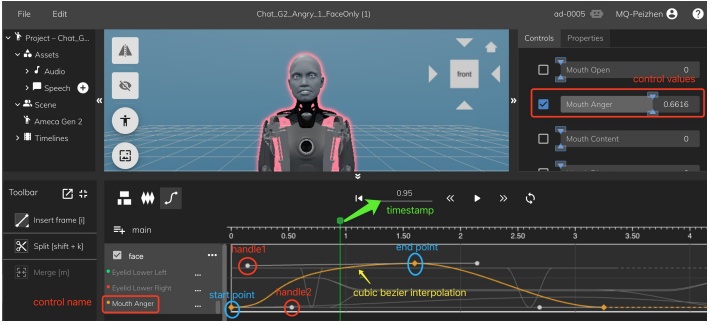
- Construct (Image, Control Values) pairs for mapping network training using Animator tool
  - Animated images collection
  - Control values collection
- Progress





# Two different views of the expression animation

- Graphical User Interface




- Data structure: a folder of json files

# Challenges and solutions

Given facial expression animations:

1. How to get values of controls of interest at (any) different timestamps?
   - bezier/linear/step interpolation
   - find smooth curves using existing keyframes
   - sample at a specified temporal resolution [1]
   - multiple curves, different interpolation types
2. How to get animated images?
   - get frames from captured video
   - FPS is a bottleneck
3. How to obtain a large-scale dataset for model training?
   - easy-to-use scripts for data processing (efficiency, cooperation)
   - generate more animations by blending the basic ones

[1] notes on sampling a cubic Bezier curve

# Expected outcomes in the following four weeks

- Mapping network training on a small-scale dataset
- Larger-scale dataset collection
- Deploy the model on Ameca