

# C++ Convolution

Jochem en Teun

# Applications

- Research
  - Fast convolution vs direct convolution
  - Audible difference?
- Microphone reverb
  - Connecting the input stream to the convolution
- File playback
  - Import an audio file (mp3/wav) in a buffer and play it using convolution

# Topics

- Convolution DSP
- File input
- Audio IO
- (Debugging)

# Convolution DSP

- Direct convolution
- Fast convolution (FFT)

# File input

- (Audio) files to buffers
- Determining compression type, decode to buffer
  - wav, mp3, etc.
- ~~UI~~listing

# Audio IO

- Jack input en output
- ~~Android?~~

# Debugging

- Breakpoint
- Logging

# Planning

- ~~Week 1: Pitch 1~~
- Week 2: Pitch 2
- Week 3: Research
- Week 4: Writing convolution library
- Week 5: Writing applications
- Week 6: Presentation



# Presentation

- 20 minutes: Explaining research and applications
- 10 minutes: Debugging
- 30 minutes: Working with the applications

# C++ Convolution

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