# 

Realtime Visual Pitch Analysis

#### The Goal

- Help musicians learn riffs
- Give visual representation of their sound
- Improve attacks and pitch accuracy

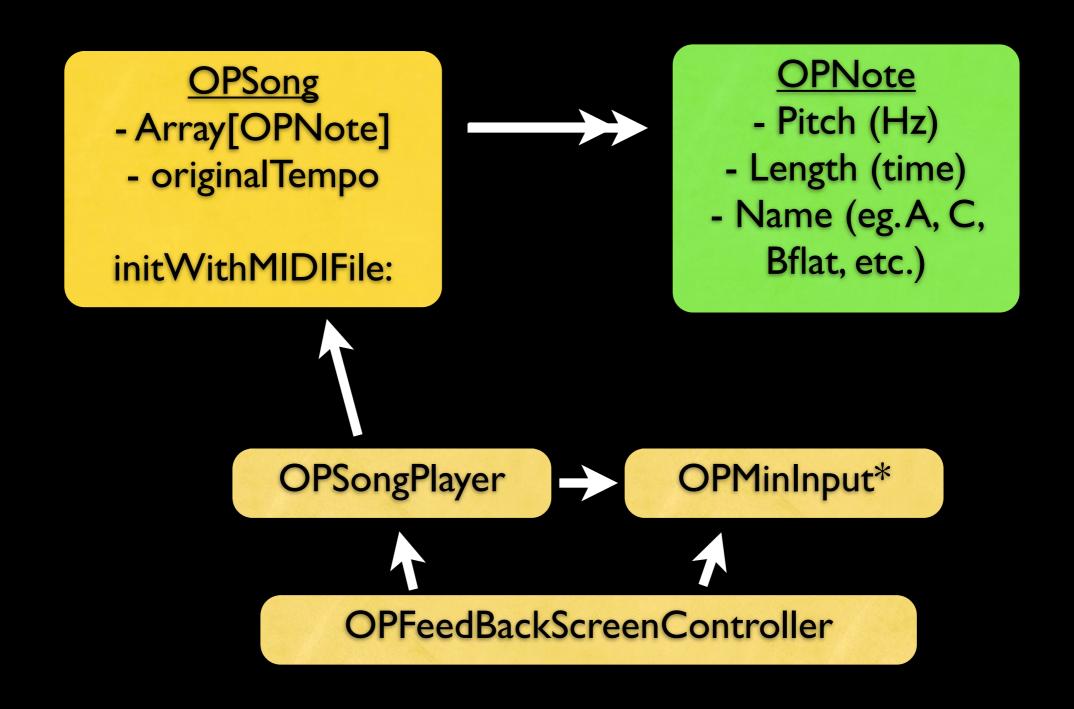
#### Description

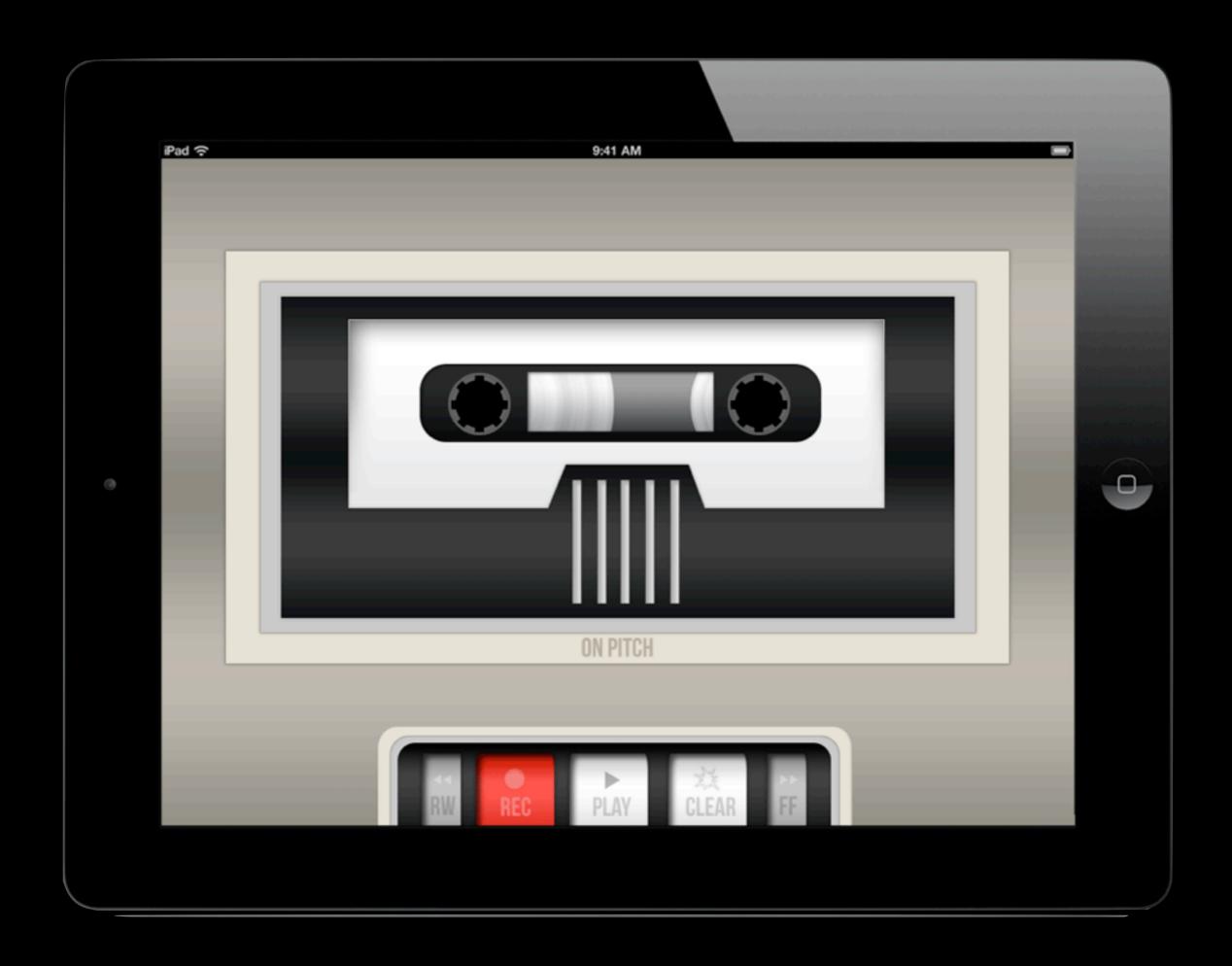
- Given some reference track (MIDI)...
- ...tell the user how right or wrong they are.
- Staff notation combined with "voice line".

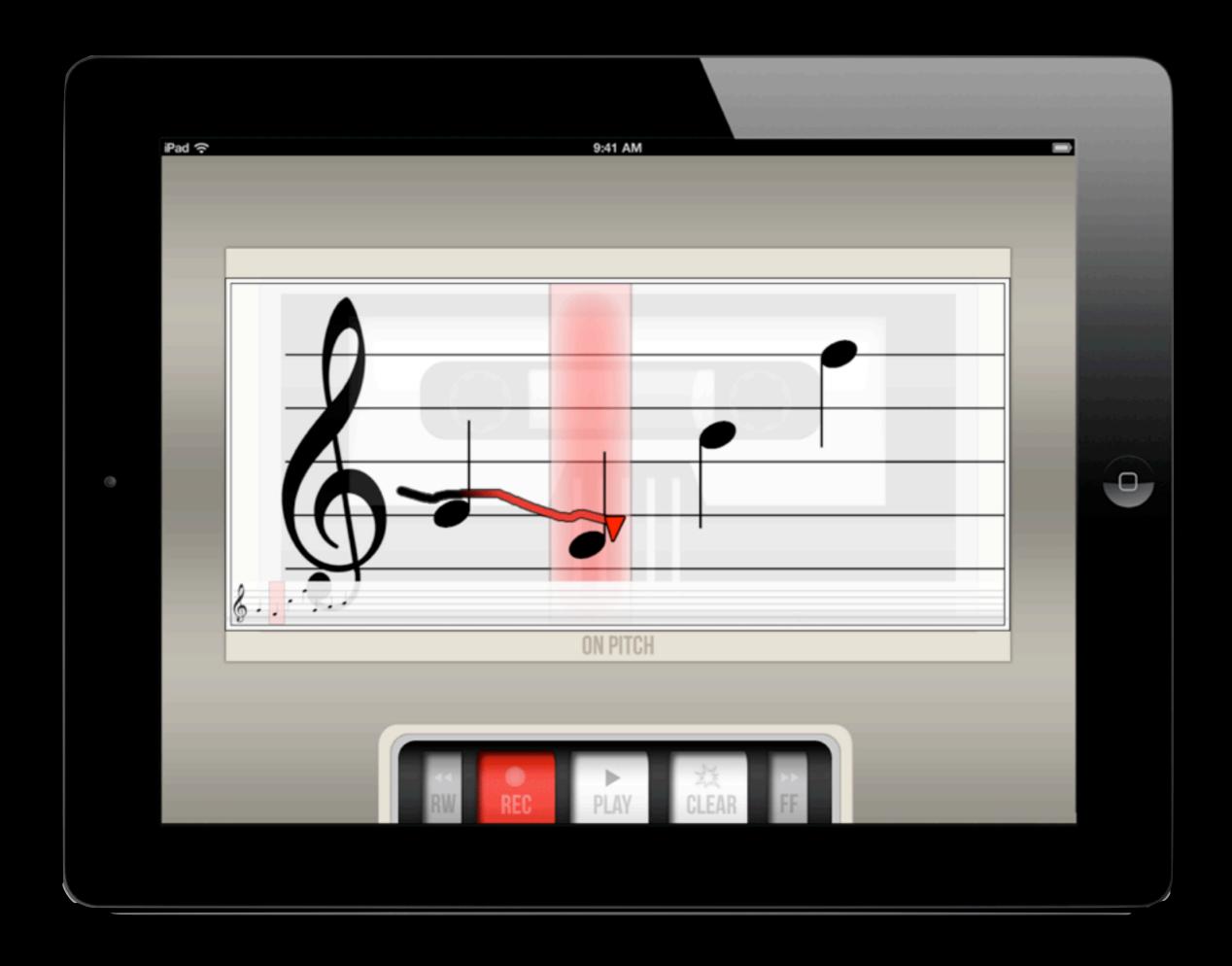
### Challenges

- FFT analysis of live audio
- MIDI import of reference track
- (Reference track creation?)

#### Internal Structure







# Inputs/Outputs

- MIDI Import
- Microphone for voice/instrument pitch
- Touch screen for interface
- Speakers/headphones to play back audio

# Secondary Features

- Alternate notation format (piano roll vs. staff)
- Change volume/tempo of reference track
- Metronome (for count in)
- Tap on reference notes to hear pitch
- Transposing of reference track

Q&A