Gesture Recognition for Virtual Orchestra Conducting Using the Kinect

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Goal of the Project

Develop an application that takes raw video data from the Kinect as input and output music with tempo control according to the gestures being performed.
Hardware & Software

● Hardware
  ○ Microsoft Kinect
  ○ Linux PC

● Software
  ○ C++ Application
  ○ Open-source, cross-platform libraries:
    ■ libfreenect
    ■ XKin
      ● OpenCV
      ● FFTW

● Graphical Output
  ○ OpenGL

● Audio output
  ○ PortAudio / rtAudio
  ○ JACK
Deadlines

- 10/26: Develop Test Build (simple gesture, audio output)
- 11/2: Integrate more complex gestures
- 11/9: Integrate JACK (musical output)
- 11/16: First Draft of Paper
- 11/30 or 12/4: Presentation
- 12/12: Second Draft
- 12/16: Final Draft