

ECS 193AB Winter/Spring2017

Machine Learning Research App

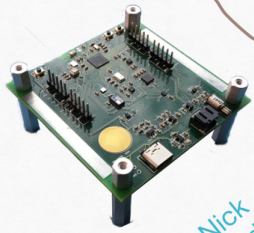

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Machine Learning Research App

Goal: To develop an intuitive app which will allow researchers in the AI/machine learning field to collect motion/physiological data along with video and annotations. This is vital in teaching computer AI's how to recognize things like "Are you doing a push up right now? Let me count how many and log it." or "Is this person at high risk of having a heart attack right now? Let me notify the doctor."

Design: A way of selecting which sensors to log data from, letting the researcher annotate what is occurring in the video while it is occurring (so the AI can later learn the patterns) and saving the recorded video + sensor data to a SD card.

Platform: Qt is the platform of choice as it compiles to android, iphone and windows natively from one code base. Most work will be done in Qt QML and JavaScript (some C++).



Board Sensors:

- Accelerometer
- Magnetometer
- Gyroscope
- Pulse Oximeter
- Microphone
- Thermopile
- Thermometer
- Galvanic Skin Response

Additional Features:

- Bluetooth low energy
- Qi Inductive charging
- Audio chime
- RGB color led
- Touch sensor
- Vibration Motor

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