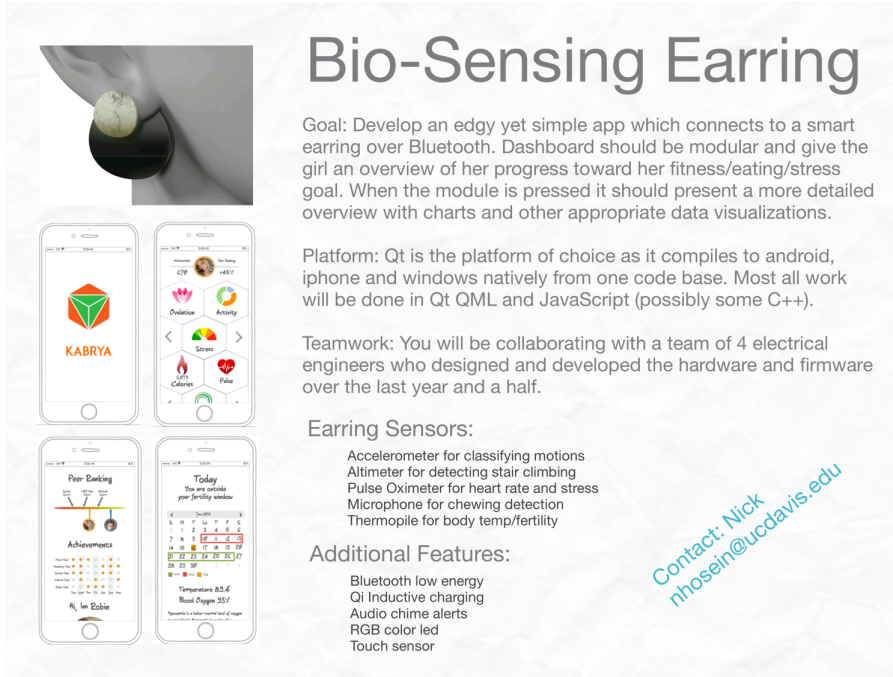


ECS 193AB Winter/Spring2017

Bio-Sensing Earring

*Not an empty page, image might take awhile to load 😊



The slide features a background of crumpled paper. At the top left, there is a photograph of a person's ear wearing a black earring with a small, round, yellowish sensor attached. Below this, four smartphone screens display the app's interface. The top-left screen shows the 'KABRYA' logo. The top-right screen shows a dashboard with icons for 'Oxidation', 'Activity', 'Stress', 'Calories', and 'Pulse'. The bottom-left screen shows a 'Peer-Drinking' chart and 'Achievements'. The bottom-right screen shows a 'Today' summary with a calendar and 'Temperature 83.4' and 'Blood Oxygen 95%'.

Bio-Sensing Earring

Goal: Develop an edgy yet simple app which connects to a smart earring over Bluetooth. Dashboard should be modular and give the girl an overview of her progress toward her fitness/eating/stress goal. When the module is pressed it should present a more detailed overview with charts and other appropriate data visualizations.

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

Teamwork: You will be collaborating with a team of 4 electrical engineers who designed and developed the hardware and firmware over the last year and a half.

Earring Sensors:

- Accelerometer for classifying motions
- Altimeter for detecting stair climbing
- Pulse Oximeter for heart rate and stress
- Microphone for chewing detection
- Thermopile for body temp/fertility

Additional Features:

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

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