The Learning Coding and Prototyping (LCAP) Program

Aims:

1. Equipping our students with coding and communication skills to be a programming developer

2. Helping students to prototype their innovative ideas

3. Encouraging students to participate in competitions such as hackathon, CUPP, Imagine Cup, etc

Workshops and mentoring:

1. Workshop hosted by industrial partners (Friday Evening)

2. Mentors meetup on bi-weekly basis

3. Our industrial partners:

   - Microsoft
   - Oursky
   - MAD Gaze
   - Sengital
   - Hong Kong Computer Society

CRESDA

1. 80% attendance of workshops and mentorship meetings

2. Submission of monthly reports at the end of each month (11:59pm)

3. Submission of minimum viable prototype before 31 May 2018 (11:59pm)

How to apply:

1. Form a team of 1 - 5 CityU students from any academic disciplines

2. Find a problem from our 4 themes (next slides) to solve

3. Submit a one page proposal of at most 1500 words to calevent@cityu.edu.hk

How to apply:

4.   The proposal should consist of

-   your team members info

-   the problem

-    the technology to use

-   how your idea solves the problem

LCAP program 4 themes:

1.Sustainability

(https://www.youtube.com/watch?v=zwJ5E_EUUF4)

2.Health

(https://www.youtube.com/watch?v=9c05imowc7Q)

3.Security

(https://www.youtube.com/watch?v=ckHdkOR1OHg)

4.Joy of Living

(https://www.youtube.com/watch?v=sk3T3_QYrT0)

Examples

Sustainability

1. Oroeco - Carbon footprint calculator

- An app to calculate your daily carbon footprint

- Offer tips adapted to your necessities and way of life

- A community to compare your impact on the environment with others

- Help to reduce carbon emission
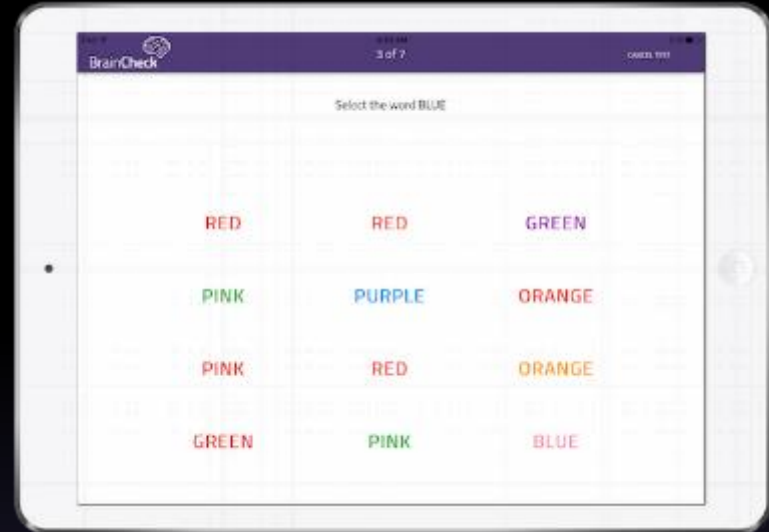
Source:

https://www.oroeco.com/

Health

1. BrainCheck

- A technology startup

- Mobile app test to measure cognitive functions

- Log cognitive health data

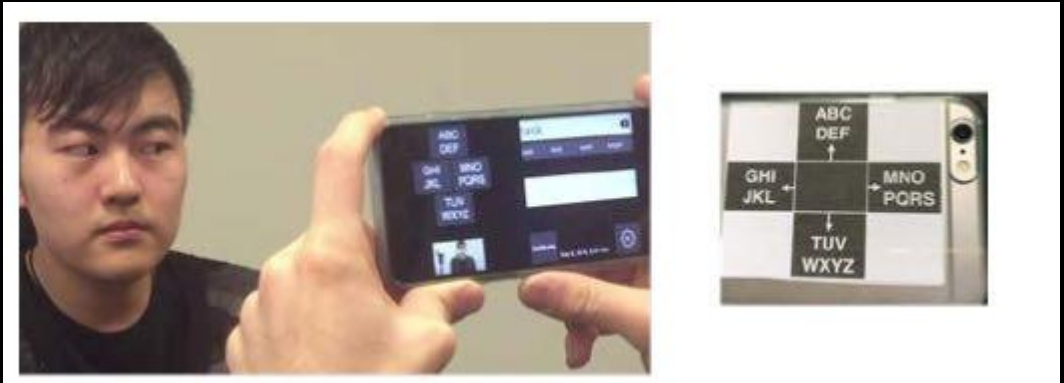- Provide physicians with your brain health data

Sources:

https://braincheck.com/products/

https://techcrunch.com/2016/10/27/braincheck-raises-3-million-for-app-to-monitor-brain-health/

2. GazeSpeak

- Mobile app developed by Microsoft

- For patients who cannot speak

- Machine learning to recognise eyes gestures

- Using eyes gestures to predict utterance

Source:

https://www.microsoft.com/en-us/research/wp-content/uploads/2017/01/gazespeak-1.pdf

Security

1. Indoor security camera with face recognition

- Recognizing your family member

  with face recognition

- Receive alert when home intruder

  is detected

- Picture/video of intruder can be recorded

  and stored in the cloud or local SD card

  Source:

  https://www.netatmo.com/en-GB/product/security/welcome
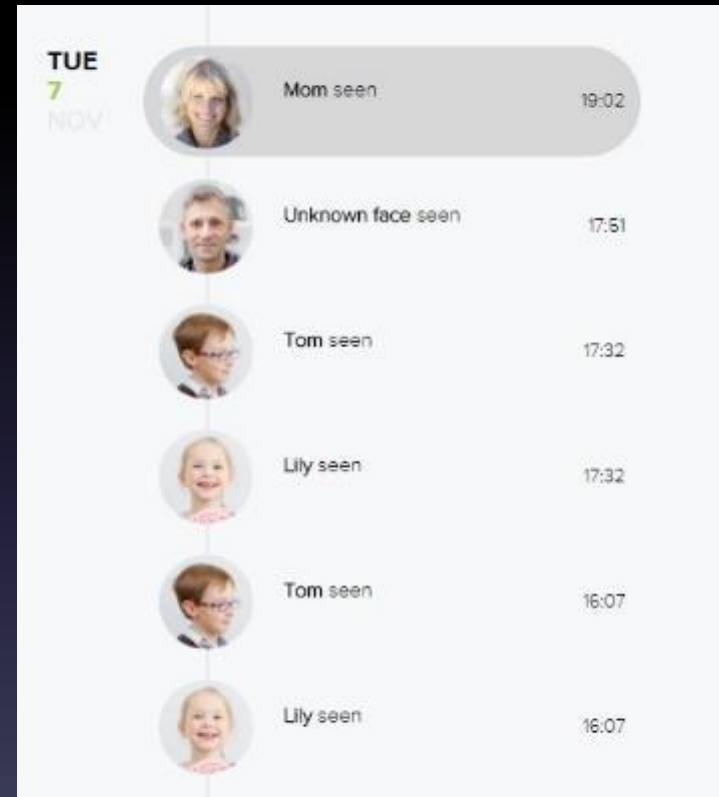
Joy of Living

1. Increase self-compassion in depressed patients with virtual reality (VR)

- **Problem**: Self-criticism hinders the recovery of depression

- **Solution**:

➤ Patients are trained to express compassion to a virtual distressed child in VR

➤ The virtual child responses positively

➤ The patients then see themselves being that child to receive compassion

- **Result**: 3 repetitions of this scenario led to significant reductions in depression

1. Increase self-compassion in depressed patients with virtual reality (VR)

Sources:

- http://www.ucl.ac.uk/news/news-articles/0216/150216-virtual-reality-treat-depression
- http://bjpo.rcpsych.org/content/bjporcpsych/2/1/74.full.pdf
- https://www.youtube.com/watch?v=GwxJVCESc-E

Timeline

1. Recruitment

   - Deadline: 26 Jan 2018

2. Grand Opening

   - 9 Feb 2018

3. Workshops and mentoring

   - Feb to May 2018

4. Program closing

   - May 2018