

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

The screenshot displays the Oroeco website interface. At the top, the Oroeco logo is on the left, and a 'SCOREBOARD' section shows four progress indicators for 'MINT', 'COMMUNITY', and 'IMPACTS'. The main navigation bar includes 'Overview', 'Impacts', 'Actions', 'Community', and 'Profile'. The central area features a 'Finish your survey' section with a bar chart for user 'kirstin_g0b2g0d' in 'Hong Kong'. The chart shows a progress bar from 0 to 100, with the current value at approximately 44. To the right, the 'Your Climate Status' section shows the user is a 'Climate Citizen' with a 'CLIMATE CITIZEN' badge. Below this, there are buttons for 'Actions' and 'Offsets'. At the bottom, there are two promotional banners: one for the 'CLIMATE IMPACT FUND' and another for 'Mint.com and Oroeco' with a technical notice.

Finish your survey

Bar chart showing Average lbs CO2e/month for user kirstin_g0b2g0d in Hong Kong. The chart has a scale from 0 to 100. The current value is approximately 44.

Your Climate Status

Climate Citizen

CLIMATE CITIZEN badge

CLIMATE IMPACT FUND banner: Vote for clean companies! We're creating the world's greenest investment fund! Vote for your green companies.

Mint.com and Oroeco banner: Oroeco is currently experiencing technical difficulties in connecting Mint data. We are currently working on a solution. In the meantime, please contact us at support@oroeco.com if you would like to calculate your impacts with survey data. We appreciate your patience.

Source:

<https://www.oroeco.com/>

Health

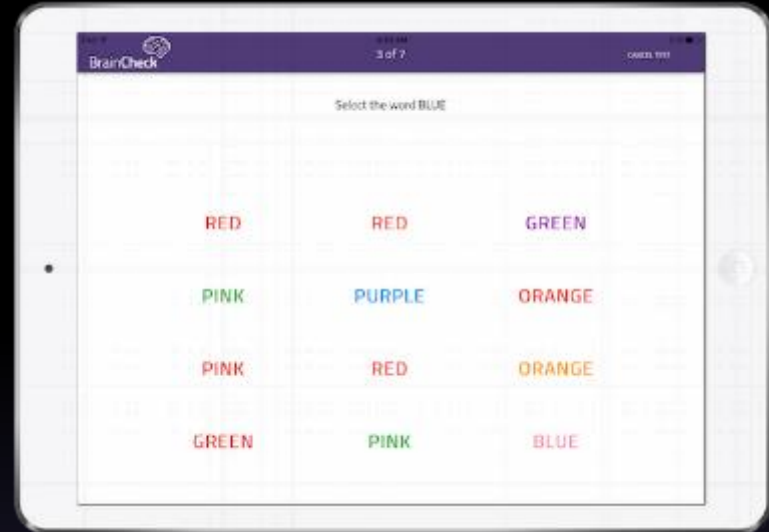
1. BrainCheck

- A technology startup
- Mobile app test to measure cognitive functions
- Log cognitive health data
- Provide physicians with your brain health data

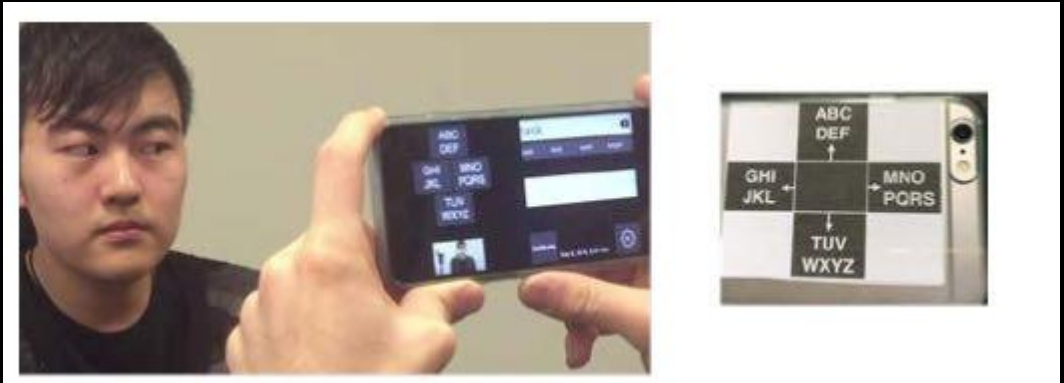
Sources:

<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>

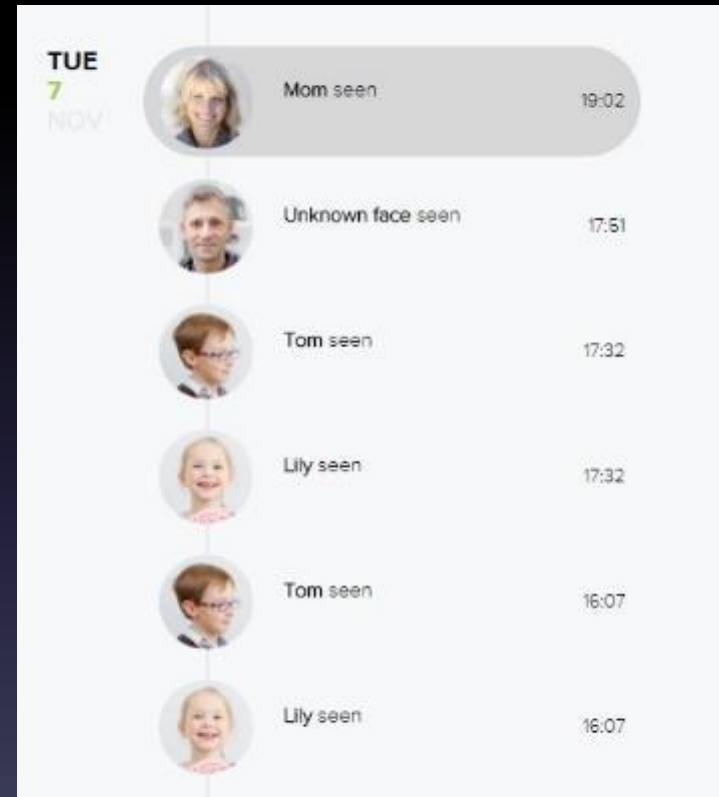
Security

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 responds 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