HEALTHY AGING

INNOX CAMP

WINTER 2022

2022.1.3 - 2022.1.22

HKSTP - HKUST ISD - HKU INNOWING

PROJECT CATALOG

Welcome to InnoX Winter 2022 Expo

InnoX Winter Camp is a project-based hands-on entrepreneurship bootcamp jointly hosted by HKUST, HKU and HKSTP. The 3-week intensive bootcamp saw the 32 young entrepreneurs from 3 universities through a human-centered and agile product design journey.

With this innovation and entrepreneurship program, we demonstrate the global-vision and the make-it-happen mindset of the dedicated students working together towards an inclusive society. In supporting the students' ambition, the camp design included tours, guest speakers, advising sessions, pitching opportunities. From design thinking (developing deep insights into market and customers' needs), to engineering design (systematically applying enabling technology), to systems thinking (building commercially viable product concepts while creating values to the customers), the program was condensed and comprehensive. The 6 multidisciplinary teams have risen to the challenge of finding real-world problems, ideating creative solutions and prototyping innovative products in the thematic focus of healthy ageing.

We would like to thank our partners who shared the InnoX vision, for offering their time, resources and expertise. Your teaching, insights and advices inspire the students at the different stages of this exciting yet rewarding experience.

We, the teaching team, are proud of what the teams have achieved within such short time. We are looking forward to continue in mentoring and supporting on their entrepreneurial venture into the future.

Congratulations to InnoX Winter 2022 Cohort!

Prof. Winnie Leung & Joseph Chan
Curators and Motivators, InnoX Winter Camp 2022

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TIME-CAPSULED LOVE LETTER IN 3D HOLOGRAM

How might we help the elderly eliminate misunderstandings and convey emotions to their family?

GIFT
DELIEVER
EMOTIONS

WHEN TIME GOES BY
MISUNDERSTANDINGS
BUSY IN LIFE

BUT LOSE
THE MOST PRECIOUS

TIME-CAPSULED LOVE LETTERS

A gift-making platform based on holographic projection, 3D model, vision control, and voice recognition.

Deliver emotions through gifts
[Beak down the psychological barrier in different generations]
Making a gift /receiving a blessing
[A powerful the elderly in their fight against loneliness]

MAKING A SPECIAL GIFT SENT TO YOUR LOVER

AS FOR YOURLOVERS

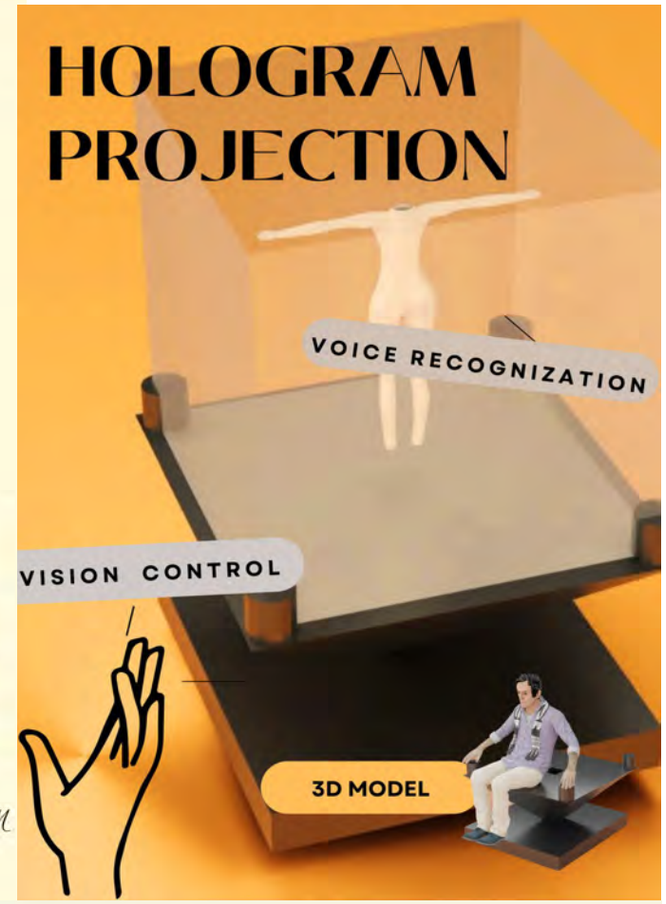
Do you have something you are **shy** to tell them?

Do you want to always be with them even **far away**?

Do you want to make surprise in your daily life like **Easter Eggs** ?

HOLOGRAM
CREATE YOUR OWN STYLE&ACTIONS

HOLOGRAM PROJECTION



A LOVE LETTER

A LOVE LETTER

Prepare **a small surprise** for others through timed emails. APP, projection side can easily customize a gift.
.(Corresponding to the voice prompt of the **holographic projection for the edrly**).
When people start customizing, they can design a gift and set the recipient to receive it **at any point in time**.
The time span of gift can be a year or even more.
Gifts can be in the form of **VIDEO, holographic projections or a treasure hunt at home**, **new custom gifts received**, etc.

CREATE YOUR OWN STYLE、GIFT AND COMPANY
WITH YOUR FAMILY MEMBERS

"INFINITY AND BEYOND"

DORA

SOCIAL ROBOT TOWARDS ENRICHING & FOSTERING COMPANIONSHIP

Problem Statement

To solve the problem of loneliness and depression in older adults by making them feel loved and motivated.

Problem

Due to lack of social company, surgical interventions and physical disorders, elderly people often suffer from mental health issues such as isolation, depression

Our Idea

Developing an Interactive robot for elderly with mental health issues such as depression and loneliness to assist them in the process of Doll Therapy by using the increased and embracing IT technology in caring sector.

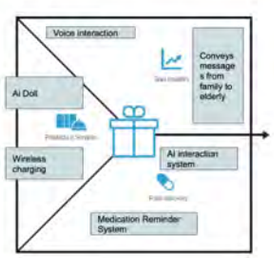
Customers

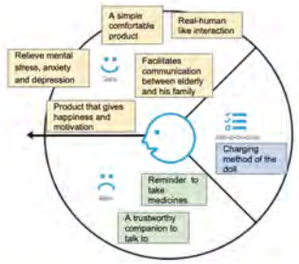
We aim to target elderly people suffering from mental health issues. Number of elderly above the age of 65 is approximately 703 million (United Nations, 2019). Further, according to World Health Organisation 1 out of every 4 elderly suffers from mental disorder. Therefore, an approximate consumer base of more than 175 million across the globe, which further continues to grow due to pandmeic.

Benefits

- Decreasing **boredom** which can reduce the appearance of **agitation and wandering.**
- Providing a **sense of belonging** and purpose
- and helping to maintain **mobility and social skills.**
- An outlet to talk about **feelings and experiences** with the doll and a source of giving and receiving **unconditional love.**
- Enabling a sense of **comfort and security** and increasing **social interaction,** connection and engagement with others

Value Proposition Canvas





product concept

TEAM MEMBER

Design & Business group

SUA
HKU
Industrial engineering and logistics management
Idealism

SAKSHAM
HKU & PKU
Economics, Finance and Management

RITHICKA
HKU
Industrial engineering and logistics management

Technical group

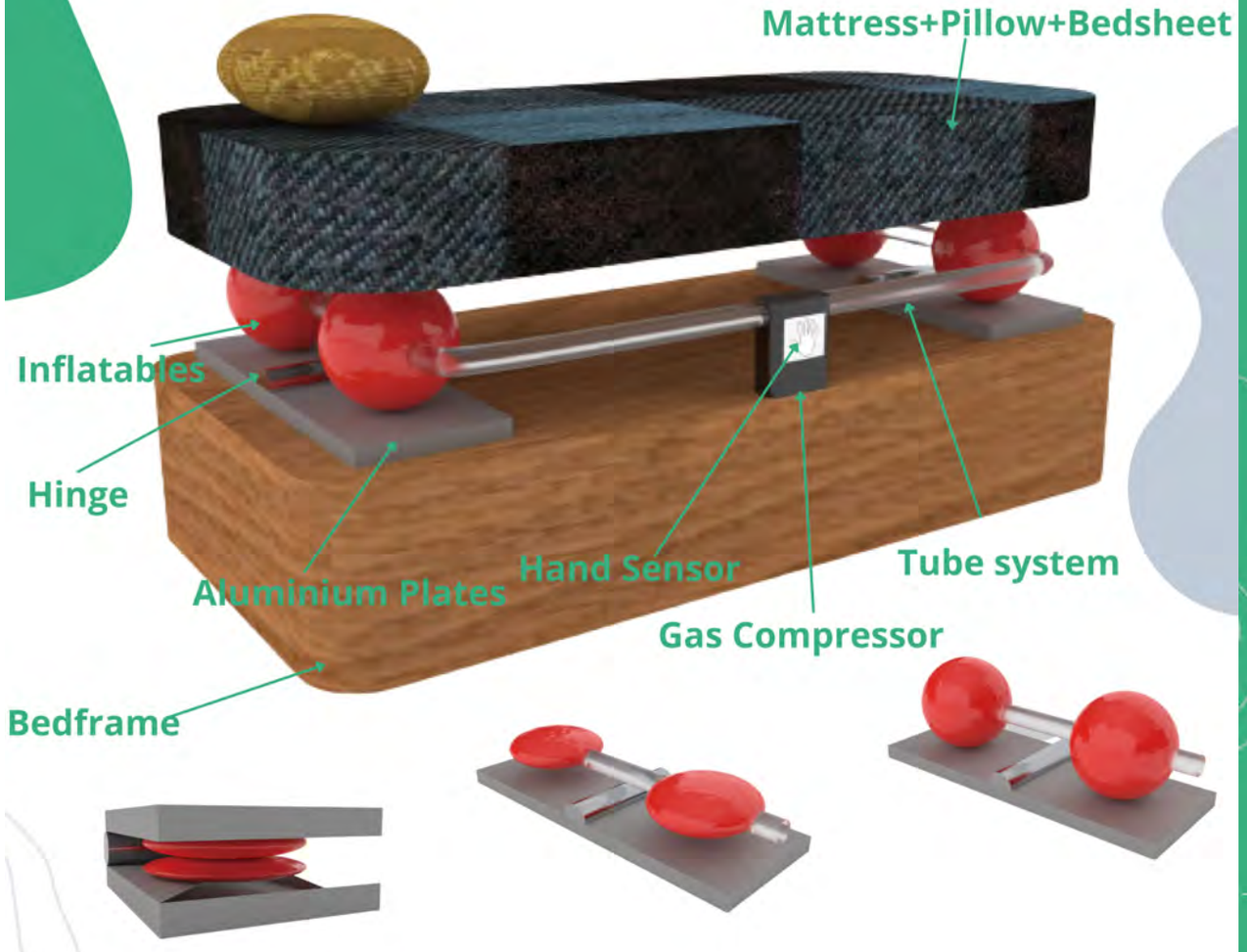
MASOOD
HKU
Computer science

WINNIE
PolyU
Electronic and Information Engineering

RAHUL
HKU
Computer Science

ENNOX

Lift your bed with ONE finger



Save your energy by...

Batteries
that are rechargeable with longer lifespan

Inflatables
that lays flat and guarantee your sleeping quality

Motion detector
that sensors hands to trigger the inflatables

Easy & Simple

1 **Slide**
Slide the plates under the mattress

2 **Wave**
Wave at the sensor to lift the mattress

3 **Wait**
Lay back and wait for it to do its job

4 **Done**
Bedsheets are changed effortlessly

Why need us?

- **40,000** dead skin shells are shed every day
- **24.4** days on average for elderlies to change their bedsheet
- **Uncountable** dust mites and body moisture (sweat, oil) leads to ECZEMA, ACNES and ALLERGIES

Who is it for?

Cleaning Service Provider

- Elderly Homes
- Individual Apartments
- Hotels and Resorts

Aryan Agrawal
HKU
Computer Science

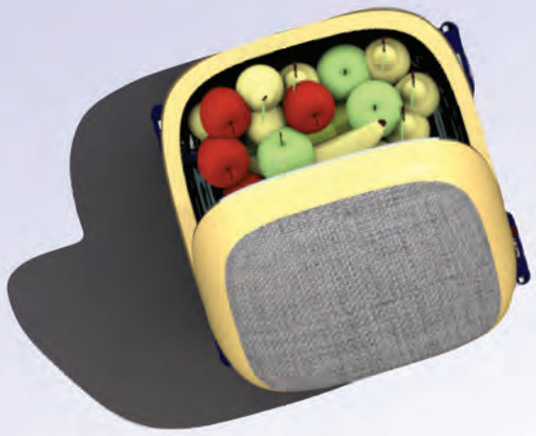
Allison Li
HKU
Biomedical Engineering

Ryan Leung
HKU
Economics & Earth System Sciences

Annie Ni
HKUST
World Bachelor in Business

Ryan Tan
HKUST
Integrated Systems & Design

Shopping made easier
for older adults



Follo

Your shopping trolley that follows

SPACEXX

Follo is for ...

Older Adults that

- do shopping
- need shopping
- love shopping

Who have experienced ...

Heavy Groceries

Muscle Aches & Pain

Weakening of Strength

Features

- Seating support
- Adjustable height for easy item loading and unloading
- Different compartments for cold/hot items
- Auto-follows during whole shopping jorney
- Safe and easy control through wristband or app

User Journey

Navigates around obstacles as it follows you on your way from home to market

Inner compartment can lift up to faciliate no-bending, no-reaching shopping

Enjoy a hands-free trip back home!

Our Team

Dana
Mechnical Engineering

Jenna
Entrepreneurship

Meiyi
Business & Design

Sammi
Mechatronics & Design

Sylvia
Computer Science

Safety. Privacy. Dignity. **iPants.**

Our **technology** can transform current healthcare to be precisely adapted to each individual with unique profiles. Through sensitive monitoring and enhanced treatment for different health problems, we empower everyone to experience enriched quality of life.

703M
people with age 65 or above in 2019

1.5B
people with age 65 or above in 2050

~36.1%
prevalence of urinary incontinence in world population

Technology

Sensors
Through non-invasive ultrasound sensors, we accurately monitor the state of the user's bladder using machine learning.

Target Users

Older adults (with mobility) undergoing Eneresis

Urine test

Urinalysis is a common test used to access many different aspects of people's health with a urine sample. Biomarker analysis technology will guide elderly to make enhanced diet decisions in the future.

Integrated Urine Collection System

Our product collects the elderly's urine leakage (from urinary incontinence) with a biocompatible and user-friendly urine collection system.

Fashionable

iPants enable you to expand your wardrobes & add taste in your fashion with ease and dignity

Smart

Through decentralized IoT Health Care, iPants monitor your health and predict your urinary pattern.

Comfortable

iPants allow you to spend a day without any discomfort.

Our Team

Johnny Lee
HKU
Engineering

Eric Kim
HKU
Biomedical Science

Caroline Zhi
PolyU
International Shipping and Transport Logistics

Yvonne Chan
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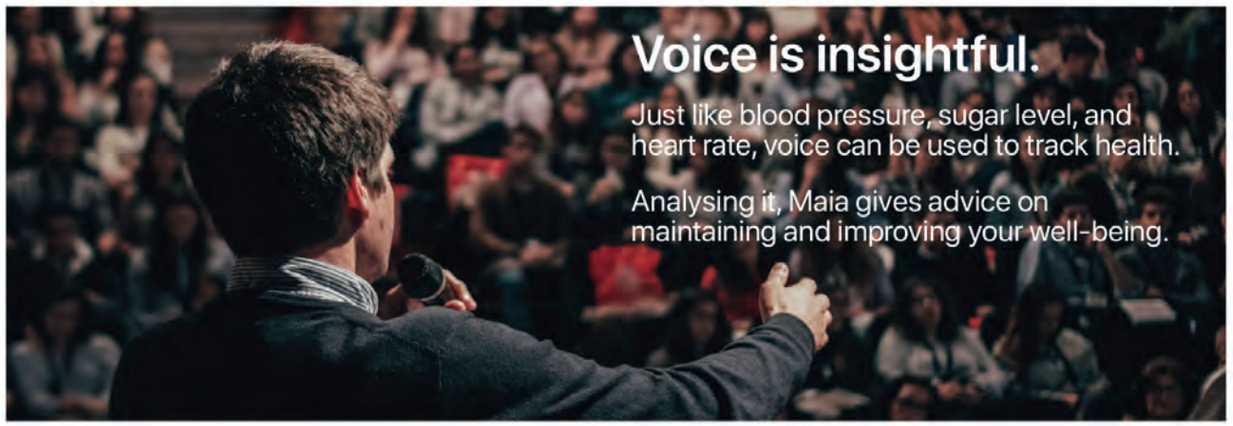
Environmental Management and Technology

Rachel Lau
HKUST
Computer Science

Ho Yan Wan
HKUST
Integrative Systems and Design

meet Maia

Your mental health assistant.



Voice is insightful.

Just like blood pressure, sugar level, and heart rate, voice can be used to track health.

Analysing it, Maia gives advice on maintaining and improving your well-being.

Pure science.

Maia can ask you questions, listen to the answers, and see more than you expect. It is like having a certified therapist, counsellor, and a friend who is ready to help in your pocket, but better.

Maia analyses the characteristics nature of your voice in different situations to give one-of-a-kind suggestions through the app.

From	To
phrases	longer lifespan
pace	better memory
volume	quality mood
pitch	consciousness
tone	stress relief

Perfect for older adults.

Continuous mood tracking is especially important for older adults.

Knowing the dynamics of its changes, we can prevent the development of age-related issues, loneliness, and depression.

Maia lives inside The Shell.

It is a small necklace, so Maia can be with you anywhere. She is ready to listen - one tap, and a record starts for 15 seconds.

You may answer the questions from Maia or just tell anything you feel she should know to understand you better.

Lasting battery, data privacy, safe strap, magnetic charging, hue illumination, loud speaker, taptic feedback, app connectivity.

All in a pretty Shell.

Seamless use.

1. Setup

2. Talk

3. Get the insights

We build Maia.

The importance of mental health is underestimated nowadays.

We are here to build a solution for tracking it better. We are here to make healing depression, loneliness, and age-related conditions easier.

Gayathri Arivuselvam

Obinna Joachin Duruiheme

Maksim Sharapov

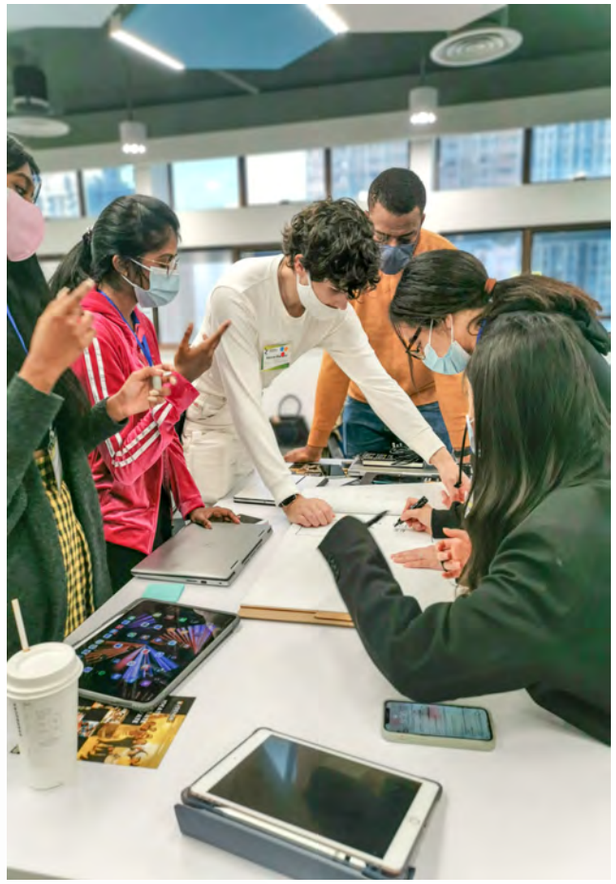
Mariam Elsherif

Susan Wong

Pf. Winnie Suk Wai Leung (advisor)

Pf. Joseph Chen (advisor)

INNOVATION



HKU
ENGINEERING

INCUBATE
IMPACT

INNOVATORS
HEALTHY AGING

INNOX CAMP

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HK innoX Academy

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THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

香港大學
THE UNIVERSITY OF HONG KONG

Hong Kong X Foundation
創科香港基金會

Strategic Partner

HKSTP 香港科技園

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Shenzhen InnoX

HONG KONG X

PolyU INNOHUB

HKUST ENTREPRENEURSHIP CENTER
香港科技大學創業中心

HONG KONG CENTER FOR CONSTRUCTION ROBOTICS
香港智能建造研發中心

hkpc 生產力局(福田)
創新及技術中心

SmarTone

iDENDRON

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Pro Collaboration Association

Xeno Dynamics Co., Ltd

INNOX CAMP