

A thin yellow square border frames the text.

Viren's **PORTFOLIO**

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01

ABOUT ME

02

WHAT I DO

03

MY WORKS

I am an **Award Winning** Design Technologist who started off as a tech nerd and gradually evolved into someone who appreciates the value of empathy while designing products which are inclusive and accessible for all.

This portfolio showcases my works along with the skills and expertise I've acquired over the years. These are projects which I'm deeply passionate about.

Pavithren | Viren

ABOUT ME

VALUES



Empathy

I put myself into the end-users' shoes to look at problems from their perspective.



Curiosity

I always wonder about how things work and how they can be made better.



Humility

I respect other stakeholders viewpoints to make my designs better.

What I do



As a Design Technologist, I amalgamate my technical expertise with my human-centered design approach to create memorable and inclusive technological experiences for all.

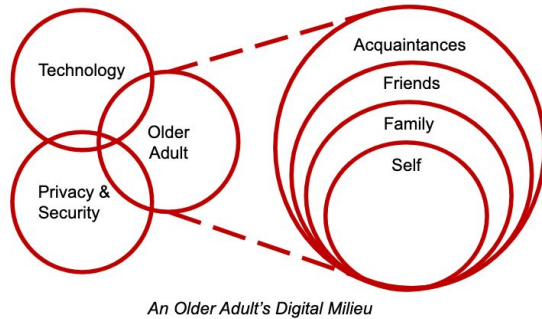
My Works

Postgraduate Research

Inclusive Privacy & Security (Phase 1)

Problem Scoping

Public Speaking	Research Publication	Study Design
Field Work	Qualitative Analysis	Research Ethics



How might we design online privacy and security inclusively?

I've been researching in the area of Inclusive Privacy and Security which aims to safeguard older adults while they connect to the Internet.

I presented my initial research proposal via a lightning talk at the SOUPS (Symposium on Usable Privacy and Security) 2019 conference held in California which brings together researchers in the field of Data Privacy, CyberSecurity and Human Computer Interaction.

Subsequently, using data gathered from my interviews with senior citizens and their caregivers, I published a poster with my findings at the SOUPS 2020, Boston (held virtually due to COVID-19).

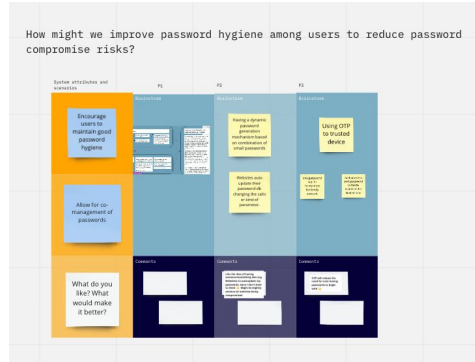
Inclusive Privacy & Security (Phase 2)

Workshop Facilitation

Qualitative Analysis

Participant Recruitment

Project Planning

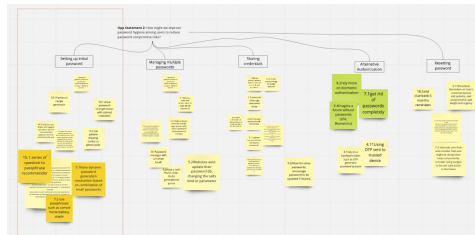


How might we... generate ideas to solve Privacy and Security issues faced by older adults?

My research collaborator, PhD Candidate (Universal Design) and I invited experts in the **Cybersecurity**, **Design** and **HCI** field to brainstorm ideas on problem statements related to Privacy and Security issues.

In total, we had 18 participants over 6 Miro whiteboarding sessions and they were given multiple approaches to ideate - **personas**, **morphological matrix** and **brainstorming**.

We performed **qualitative coding** on the ideas using **affinity diagramming** and used them for our next phase of research.



Industry Project

Facility Management Chatbot

Conversational Design

Project Management

Solution Architecture

Business Analysis

Wireframing



Hello Vikram, how may I assist you today?



Thanks for sharing the details. I will create a case for you.

Hi, the light bulb is blown in lecture hall 21



I led a Chatbot implementation project as a **service delivery manager** and **solution architect** for a US facility management company's HQ in Singapore. Apart from managing the project, I was also involved in shaping the **conversational design** of the chatbot and dashboard user interface for the client's contact center agents who handle chat escalations.

Undergraduate Projects

PROJECT PERI

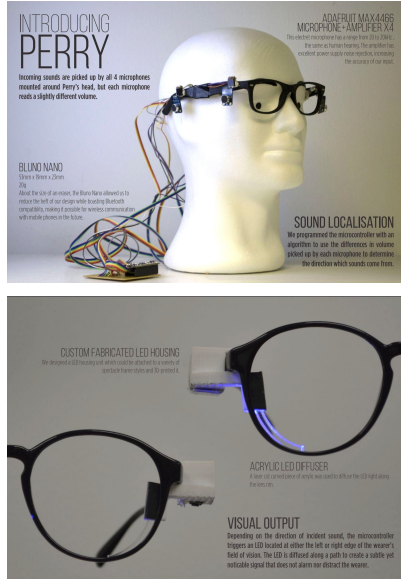
Winner, James Dyson Award (SG), 2017

Problem Scoping

Ideation

Field Studies

Iterative Prototyping



How might we build a better world by design?

Project PERI was my first foray into design. I had the opportunity to work on this project during my **Introduction to Design** module at SUTD where we were tasked to solve a problem around “**Better world by Design**”. We carried out our **Design Thinking** process with problem scoping, framing, brainstorming, iterative prototyping and user interviews and testing. Project PERI won the James Dyson Award at the Singapore level in 2017. [Link](#)

Working on this project was an eye-opener and made me realize the importance of **empathy** in Design. The entire process also piqued my interest in **inclusive design** and **user experience research**.

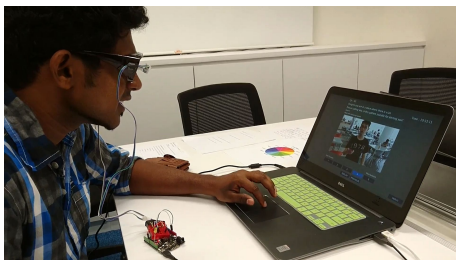
Undergraduate Research at SUTD-MIT IDC

Hardware Development

Study Design

Software Development

Publication

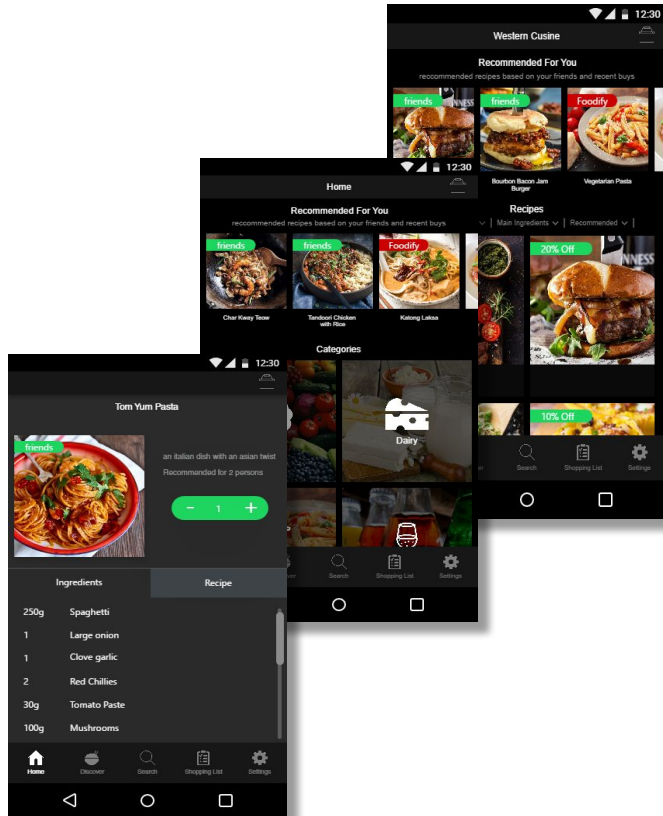


How might we use a single pixel to convey information about sound?

As an undergraduate researcher at **SUTD-MIT International Design Centre**, I evaluated the use of lights to convey information about sound. I crafted out a **research plan** and worked with a few of my teammates to conduct the research.

I developed an application and integrated it with hardware to automate data collection during user studies. As part of the study, we recruited hearing, deaf and hard of hearing participants.

After the user studies, we worked with 2 PhD candidates to analyse the findings and co-authored a publication at **OzCHI** 2016. [Link](#)



How might we redesign grocery shopping apps so that it adapts to the lifestyle needs of Singapore residents?

We analysed online grocery shopping behaviour, adoption blockers and common pain points amongst Chinese and Indians in Singapore through user interviews. Thereafter, we developed personas based on our findings and designed an app prototype inspired by Spotify which adapts to the lifestyle needs of the users.

Uncle Banking

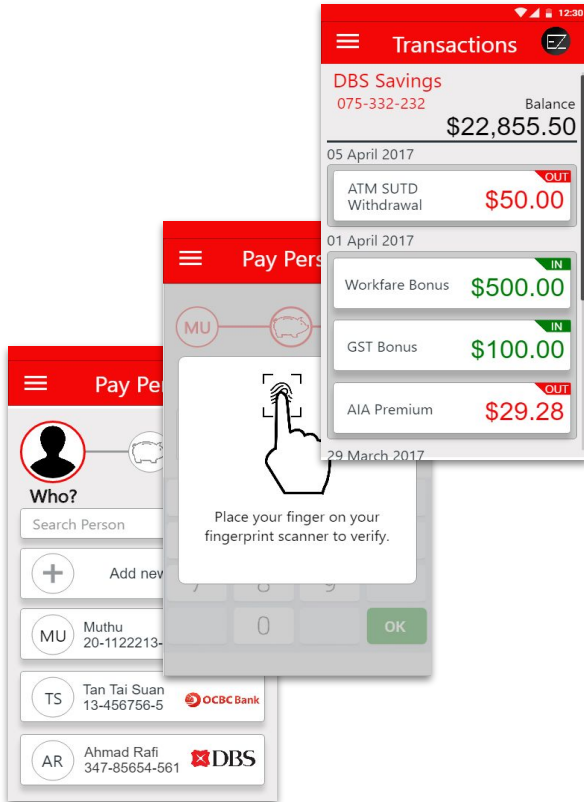
UI Design

State of the Art Analysis

Lo-Fi App Prototyping

Heuristics Generation

Inclusive Design



How might we improve the learnability and memorability of mobile banking applications for uncles and aunts in Singapore?

This project was part of my User Interface Design module at SUTD. My team and I analysed local banking apps and conducted interviews with older adults to capture common pain points while using these apps.

We identified that learnability and memorability were key barriers to internet banking adoption amongst them. We iteratively designed prototypes and came up with heuristics to tackle this issue.

Smahjong

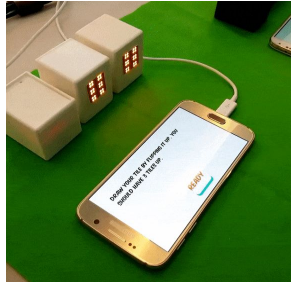
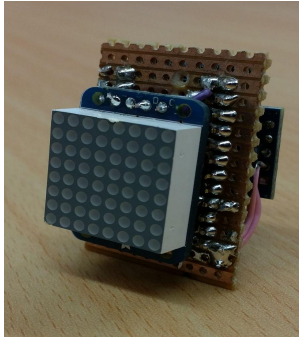
Problem Scoping

Literature Review

State of the art analysis

3D Printing

Hardware Prototyping



How might we tackle the problem of social isolation amongst Seniors in Asian Cities?

Loneliness is an increasingly worrying problem amongst older adults especially in Singapore. We did a literature review of existing technological solutions available to tackle this issue and eventually decided to create a novel IoT game - Smahjong (a portmanteau of Smart and Mahjong).

Smahjong allows seniors to play Mahjong with anyone over the Internet while being at the comfort of their home.

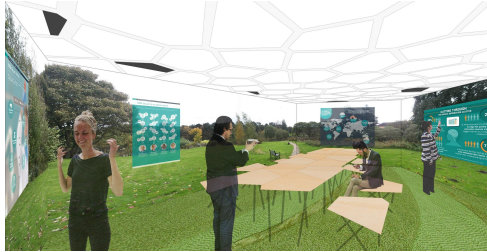
CAPSTONE

MSD Digital Health Studio

Stakeholder Management

Multidisciplinary Project Management

Experience Design



MSD

Location: Singapore (selected), Czech Rep., U.S.A.

Purpose: Meeting (selected), Colocation, EBC, Studio

Duration (Hrs): 1, 2 (selected), 3, 4, 5, 6, 7, 8

Number of users: 1, 2, 3, 4 (selected), 5, 6, 7, 8, 9, 10

Buttons: OK, Dashboard, Shutdown, ?

How might we design a space which transforms with time and context?

As a multidisciplinary team consisting of Architects, Engineers and Computer Scientists, we worked with Stakeholders at MSD IT HUB in Singapore to design their Digital Health Studio.

We conceptualized a smart space which adapts to the context of use based on information collected from various sensors, analytics data and user interactions.

Other Projects

Design Thinking

Design Workshop Facilitation

Mentorship



Design workshop facilitator, UWC Design Thinking Workshops by Augmented Human Lab, SUTD

Mentor, ENPower - Winning Team @ Fraser Inclusive Malls "Inclusive Spaces" Hackathon. [Link](#)

Design workshop facilitator@ COVID-19 SUTD-CGH Hackathon

Deafaloper Workshops

Design Workshop Facilitation

Participatory Design



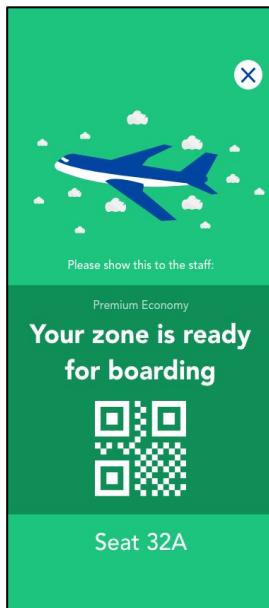
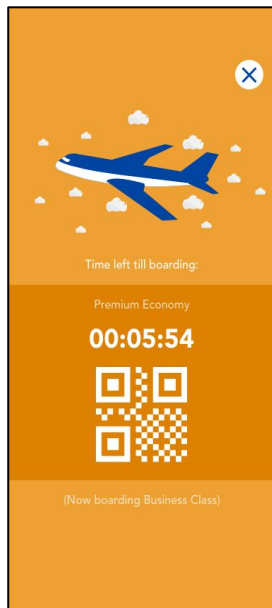
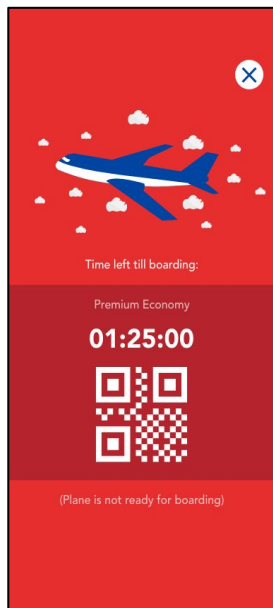
I started this project along with some like minded designers and engineers to inculcate DIY skills amongst Deafies. We believed that by doing so, it would allow them to develop quick fixes to everyday problems. Due to the smaller market segment of disabled communities such as the deaf, they have to pay a higher price for simple solutions to daily problems. [Link](#)

SIA APP Challenge (2019)

Wireframing

Service Design

Product Design



How might we... offer an effortless and customised ground experience for our passengers?

We started our design journey by identifying common pain points faced by travellers while on-ground. One of the designs we generated was **broadcasting colored coded boarding passes** to passenger's SIA app which would allow for those seated in various zones of the flight to board when it's their turn. The airline staff would have the capability to customize the broadcast notifications' seat numbers and colors. We decided the use of colors as it would allow for staff to visually inspect passengers from a distance and also allow other passengers to easily identify if an individual is ready for boarding. This would in turn lead to less overcrowding at boarding counter and lesser 'SQuse Me's.

CONTACT

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Thank you