

Research being undertaken by Deakin's ARC Research Hub for Digital Enhanced Living

Professor Kon Mouzakis

Hub Director

Co-Director, Applied Artificial Intelligence Institute (A²I²)

4th September 2020



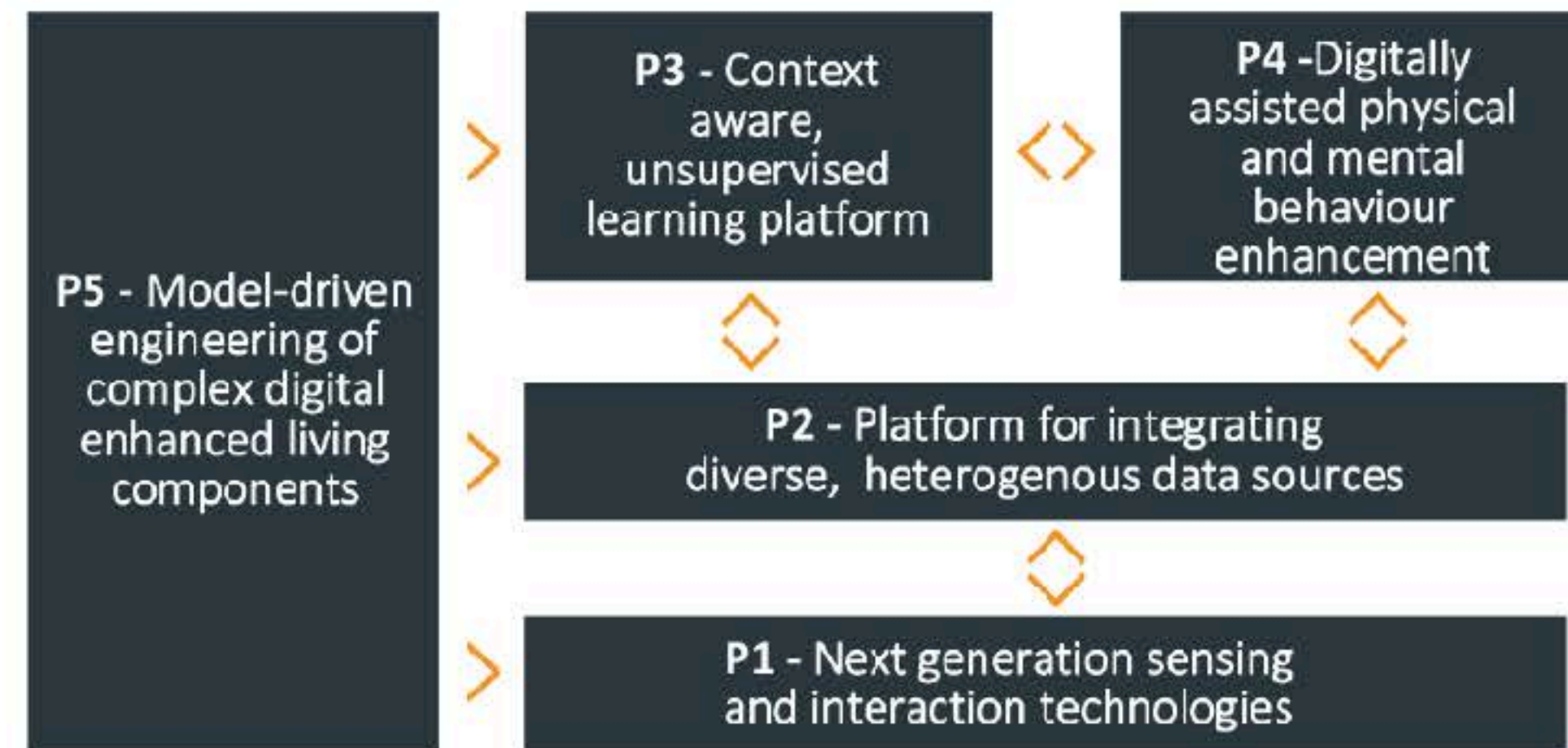
Overview



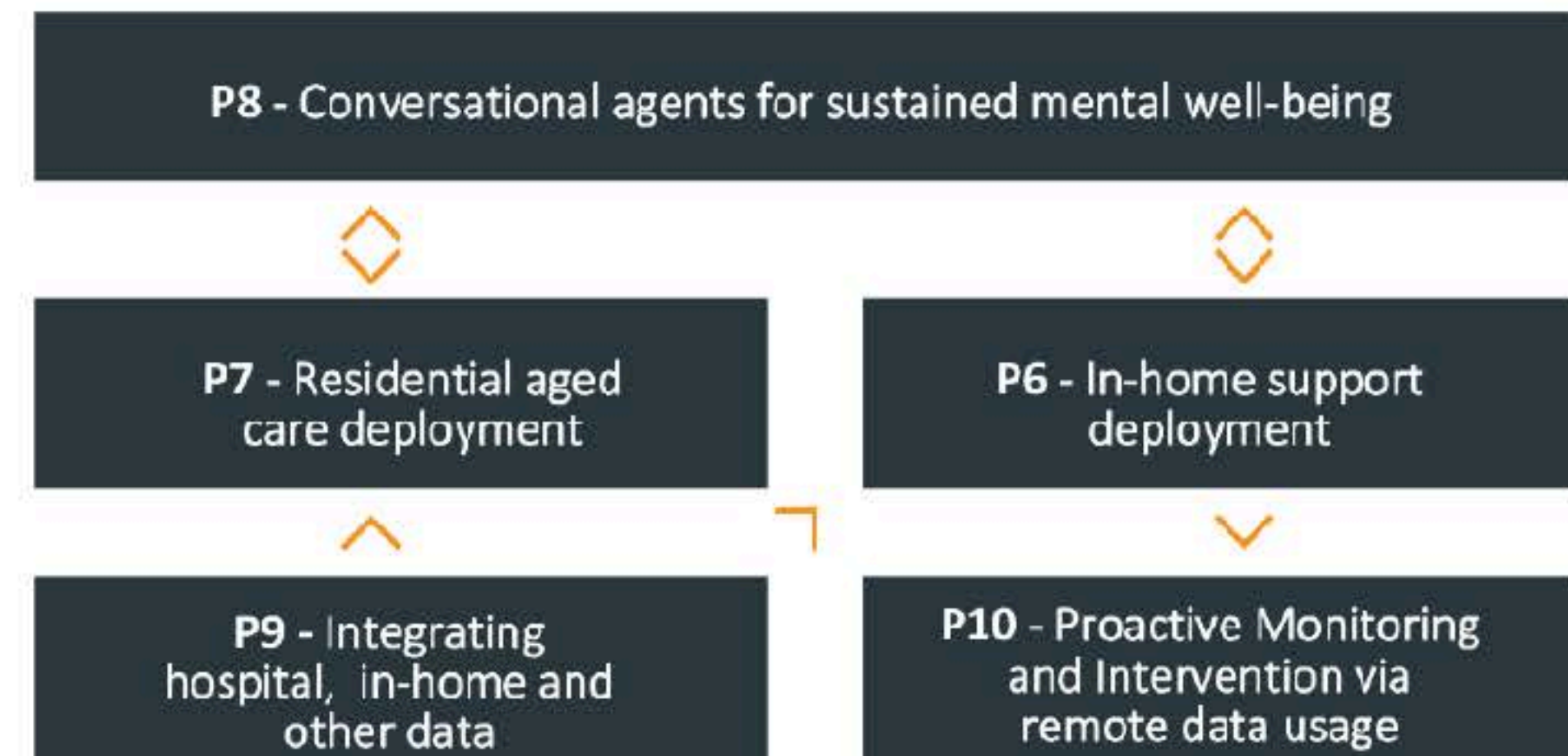
- ARC funding awarded in 2017
- Commenced operations in 2018 at Deakin University
- Hub officially launched by 2 Federal Ministers in August 2019
- 1st Digital Enhanced Living Symposium held in December 2019
- Governed by an externally chaired Hub Advisory Board

Research Themes

KEY TECHNOLOGY RESEARCH THEMES



KEY TRANSLATIONAL RESEARCH THEMES



- 2 main themes - **Technology** and **Translational**
- All projects contribute to at least one of the themes

Partners

Funding	University (International)	Industry
Australian Research Council	University of Copenhagen	Black Dog Institute
Deakin University (Admin Org)	Denmark Technical University	Dementia Australia
	Friedrich-Alexander University	Uniting AgeWell
University (Domestic)	Dublin City University	Uniting NSW.ACT
Flinders University	University of Auckland	Interrelate
Monash University	Auckland Technical University	Health Metrics
University of New South Wales		ACH Group
University of Technology Sydney		goAct
		iCetana
		C-Born Software
		<i>Cancer Council Victoria (*new)</i>

PhD Projects

Name	Projects	University
Judith Hocking	Tablet based conversational agent	Flinders
Nicky Baker	Health interventions based on functional health deficits	Flinders
Roxanne Llamzon	Interventions and generative mechanisms in Digital Enhanced Living	UNSW
BK Lee	Examining content and complementarity in Digital Ecosystems	UNSW
Kerry Rigby	Deploying Digital Enhanced Living technologies for residential aged care	Deakin
Duc Xuan Nguyen	Recognising multi-resolution activities in multi-modal, noisy sensory data	Deakin
Hala Abdelkader	Integrating hospital, in-home and other data	Deakin
Ben Joseph Philip	Model-driven engineering of digital enhanced living solutions	Deakin
Shangeetha Sivasothy	Sensor fusion for personalised models of a resident	Deakin
Tara Johnson	Understanding and addressing eHealth literacy barriers and enablers	Deakin
Rebecca Nourse	Smart home system for patients with cardiovascular disease	Deakin

Designing a Motivational Conversational Agent for Brain Injury Rehabilitation



Can an Avatar make me more motivated to do brain injury rehab?

Judith Hocking, Prof Anthony Meeder, Prof David Powers, MProf Solinda Largo, Dr Lisa Penhall Lewis, Flinders Digital Health Research Centre

Brain Injury Rehabilitation

Prevalence: 1 in 45 Australians have an acquired brain injury¹

Acquired brain injury: trauma, pathophysiology, surgery

Symptoms: physical (balance, strength, function);

cognitive (↓ Memory & ↓ insight = ↓ Motivation)

Recovery: through neuroplasticity. **Rehabilitation:** goal-directed; to improve independence; multi-disciplinary.

However, **recovery can be impeded** due to **limited therapy resources**, & **clients can lack motivation**.



Health behaviour change

Self-Determination Theory²

3 inherent human needs

- Caring people (relatedness)

- Own goals (autonomy)

- Confident in tasks (competence)



Motivational Interviewing³

Therapeutic conversation

- overcome ambivalence, barriers

- set, initially **motivating goals**

- client seen as expert



Conversational Agents

24/7 accessibility, portable: dialogues impact user's behaviour

Conversational Agents for health

- Emerging evidence for feasibility & user experience; ↓ efficacy data; no guidelines.

WHO digital health guidelines⁴

- Human-Computer-Interface affects outcomes; no specific guidance on Conversational Agents



A Conversational Agent could provide extension to therapy in Brain Injury Rehabilitation where client needs outweigh clinical resources. None yet designed.

Motivational Conversational Agent for Brain Injury Rehabilitation

A priori Concept Map



Safe design & development to include

1. Supportive dialogues using health behaviour change principles
2. Co design with clinicians & clients
3. Clinician oversight during use
4. Pilot trial in Brain Injury Clinic



Conversation dialogue planning		
Theory	Avatar questions	Client answers
Self-Determination Theory		
Autonomy	What do you want out of rehab?	RUN
Competence	How confident are you in the 70-100 mts?	OK
Relatedness	Who can help you?	PARTNER
Motivational Interviewing		
Meaningful	Why is this important for you?	FITNESS
Goal-setting	What initial steps can you take?	DAILY WALK
Planning	What barriers could get in the way?	FATIGUE
Client answer = data for avatar to form dialogue, progress reviews		
Clinic visit	CA questions	Function
Initial clinic appointment to set-up	Questions as above, plus program activities & personal progress, interest	Assess client needs, create link goal & sub-goals
Clinic review for progress feedback	Are goals still relevant? What feedback is best? Need extra resources?	Can track goals & tasks, progress summary, produce
Every dialogue iteration links to health behaviour change		

References: 1. Australian Bureau of Statistics (2018) Acquired brain injury in Australia. 2. Deci, E. L., & Ryan, R. M. (2000). The role of purpose in life and human well-being: Perspectives from the self-determination theory. *Journal of Personality and Social Psychology*, 79(2), 124-145. 3. Miller, T. L., & Rollnick, S. (2002). *Motivational interviewing: Preparing for change*. New York: Guilford Press. 4. World Health Organization (2019) Digital health guidelines: Evidence, governance and ethics. Geneva: WHO.



INSPIRING ACHIEVEMENT

Judith Hocking - Flinders U
A conversational agent could provide extension to therapy in brain injury rehabilitation where client needs outweigh clinical resources.

Nicky Baker - Flinders U

Health interventions based on functional health deficits for older adults

Stumbles, trips and near-misses

Nicky Baker



Phase 1 Identify 'near-miss'

Aim: Identify 'near miss' (NM) group from non-fallers (NF) and fallers (F)

Setting: Community with local government & business

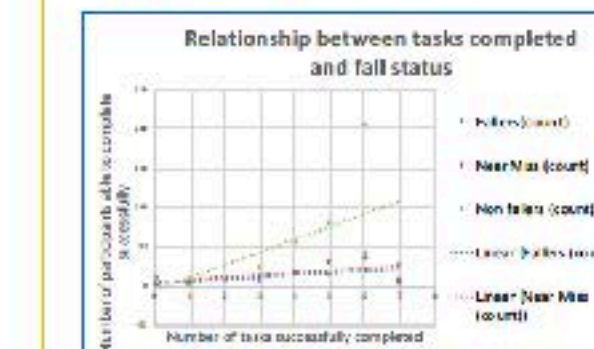
Participants: 644 home-dwelling, healthy adults aged 40-75y

Interventions: 1. Subjective history of falls and/or near-miss in past 6 months; 2. Objective testing of balance activities (combination older adult & younger athlete balance testing)

Analyses: Odds Ratios (OR), sensitivity and specificity, correlation coefficient between fall status and failed tests

Results:

- OR indicate NM are 3x likely to fail key balance tasks as NF
- Sensitivity of tasks 62%; specificity 91%
- Moderate negative relationship between ability to succeed in balance tasks and fall status (Fallers $r = -0.51$; Near Miss $r = -0.57$; Non-Fallers $r = -0.59$)



Discussion: Falls risk screening established for older adults in community. Near miss group now distinguished from non-fallers by relative inability to complete combination of static, dynamic and functional balance activities

Conclusion: Near miss group distinguished from non-fallers by likelihood of failing combination of static, dynamic and functional balance tasks.

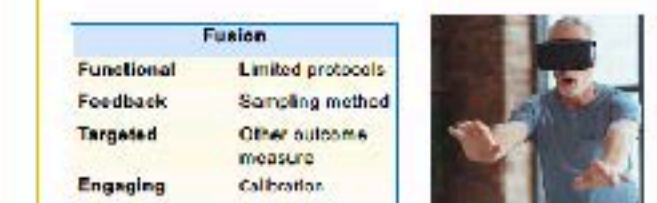
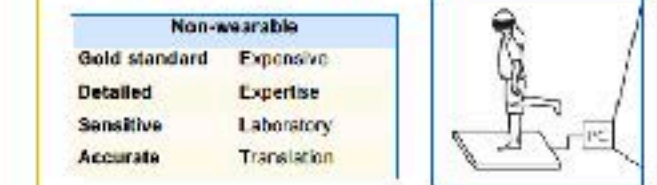
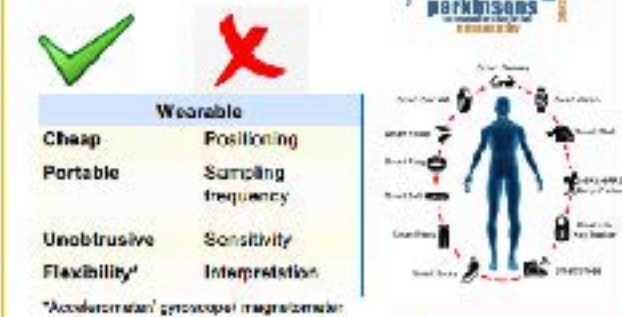
Phase 2 Which technology?

Aim: identify and map available systematic review evidence for classifications of balance assessment tools (Chaffour et al., 2018)

Methods: 2x author verification, data extraction, analysis, writing

Results:

- Multiple populations tested
- Benefits and Barriers



Limitations: testing activities translated to real-life balance activities; sensitivity for change

Next steps: IMU for incremental changes and monitor over time

References: Chaffour, K., Dwyer, R., & Gribble, A. H. (2018). From fall prevention to fall recovery: A systematic classification of fall-related systems. *IEEE Systems, Man, & Cybernetics*, 48(12), 1512-1522.



Acknowledgements: Supervisors Prof Sue Gordon, Prof Anthony Meeder, Assoc Prof Niranjan Bickard; Librarian Nikki May; co-authors Prof Karen Gimmer, Claire Cough.





DIGITAL INNOVATION ECOSYSTEM ALIGNMENT IN HEALTHCARE: A CRITICAL REALIST PERSPECTIVE

Prof. Lemuria Carter | Roxanne B. Llamzon | Dr. Felix Ter Chian Tan
UNSW Faculty of Business School of Information Systems and Technology Management

Successful Innovation Needs Diversity and Collective Action

Digital innovation ecosystem is the alignment structure (Adner 2017) where diverse actors converge to share resources, information, and technology towards a shared outcome (Wang 2018, 2019).

Diverse actors determine the success of a health intervention (Vedel et al 2012; Kallander et al 2013; Lambooli and Hummel 2013; Lennon et al 2017).



Developing a Framework for Ecosystem Alignment in Digital Innovation Ecosystems

How do diverse actors develop alignment in digital innovation ecosystems in the healthcare sector?

In this research, we apply an ecosystems approach to understand the process and outcomes of alignment among diverse actors in digital innovation ecosystems in the healthcare sector within selected countries.



Key Insights from Literature

Berbya et al (2015) on IS Alignment

A need for: 1) multi-level research to understand the interactions between alignment dimensions that might be operating simultaneously (p.4); 2) empirical evidence of the complex relationship between alignment dimensions and business value

Tan et al (2016); Wang (2018, 2019) on Innovation Ecosystems

A dynamic collective of interdependent actors and the resources they rely on to create integrated solutions enabled by digital technology

Moore (1993, 1996); Adner (2006, 2017); Hoon et al (2015); Tan et al (2016) on Ecosystems

Alignment of actors is a precondition for successful innovation; extant ecosystem research is fragmented; Site-specific thinking prevails

Mingers et al (2013); Hanfridsson & Bygstad (2013); on Critical Realism and Case Studies

Critical realism through generative mechanisms have been used in IS, e.g., the digital infrastructure evolution in the Scandinavian airline industry

Bygstad (2010); Bygstad & Munkvold (2011) on Critical Realist Case Studies and Analysis

Studies using generative mechanisms to explain phenomenon, e.g., innovation, evolution

Roxanne Llamzon - UNSW Interventions and generative mechanisms in Digital Enhanced Living

Theorizing Complementarity in Business Ecosystems



Participating Researchers



BoKyung (BK) Lee
PhD. Student
University of New South Wales

Supervised by:



Dr. Felix Tan
Senior Lecturer
University of New South Wales



Dr. Zitlu Guo
Associate Professor
University of New South Wales

What is Complementarity? Why is it important?



Firms no longer produce goods or services alone, but form a complex network that is structured for a common goal. This network is known as an **Ecosystem** (Moore 1993, Iansiti & Levina 2004, Adner 2017, Jacobides et al. 2018)
In the ecosystem, participating firms collaborate and develop to better complement each other (Gyr-Jones & Kornum 2013) in order to achieve synergetic outcomes (Milgrom & Roberts 1995). The state of which is referred to as **Complementarity**

TERM	DEFINITION	REFERENCE
Resource Complementarity	...resource complementarity is the configuration of technological, infrastructural, and business resources to create synergies and generate greater returns in one another's presence	Woudstra et al. (2017)
Knowledge Complementarity	...an agent shares its knowledge with other agents and utilizes the combined knowledge for the purpose of innovation.	Kim et al. (2019)
Technology Complementarity	...existence or an alteration of a certain technology inspires innovation by a complementing another existing technology or the environment	Tece (2006)
Product Complementarity	...Decrease in price of 'X' leads to increased consumption of 'Y'	Hicks (1970)
Consumption Complementarity	...Increase in consumption of 'Y' leads to increase in consumption of 'X'	Milgrom & Roberts (1995)

Understanding complementarity comprehensively is critical for the survival of the firms and their ecosystem (West & Wood 2014)

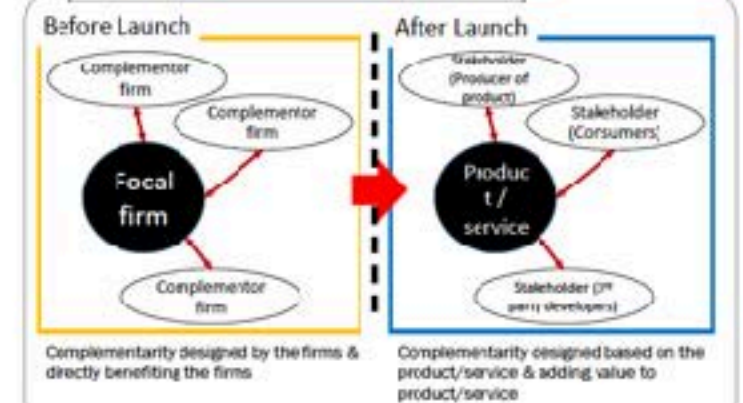
Design of studies

Qualitative case studies

1st Study RQ: How and by whom is complementarity built before and after the launch of a product / service in the ecosystem of digital goods?

1st Study Case: Digital content ecosystem of South Korea
The characteristics of Digital contents (digital goods): Recombinant, Intangible, Accessibility, Aspatial (Quah 2003, Rayna 2008, Bradley et al. 2012) makes the product more independent of the producer once it is launched compared to physical goods
Most companies are providing 'digital version' of their services, hence the findings could later be applied in different context

Expected findings & Contribution



Future Work

- Collect additional data & complete 1st research
- Plan 2nd research - complementarity in the context of 'coevolving ecosystems'

BK Lee - UNSW Examining content and complementarity in Digital Ecosystems



Nurses and direct aged care staff familiarisation with new technologies in the workplace.

Background

Nurses and direct care staff are, or will be, active users of technologies in their aged care workplaces.

Becoming familiar with these new technologies from the initial first sighting and introduction, to proficient working knowledge involves a learning curve for most staff.

The processes and resources that staff members use to become familiar with new technologies in an aged care environment are not well understood.

Research aim

To understand how nurses and direct aged care staff become familiar with new technologies that are intended to become normalised processes in their workspaces.

Research objectives

1. To identify the technologies that are currently present in the everyday workspaces of nurses and direct care staff specific to their work role, responsibilities, and the care of older people.
2. To categorise the resources that are currently available to guide and support staff with becoming familiar with technology in the workplace.
3. To explore how nurses and direct care staff become familiar with new technologies in their aged care environment.
4. To identify the components of the familiarisation process with technology and analyse these through the lens of the Normalisation Process Theory (NPT).

Proposed methods

1. Workplace audit to identify technologies that are present in the clinical environment.
 2. Examine and extract data located in staff facing documentation and resources intended to support staff familiarisation with technology systems and devices.
 3. Conduct qualitative interviews and/or quantitative surveys with nurses and direct aged care staff.
 4. Investigate and collate individual and organisational processes enabling staff familiarisation with technology.
- Sample and setting: Nurses and direct aged care staff working in metropolitan residential aged care facilities.

Data analysis

- Categorise the technologies, and the resources and supports available to staff.
- Review and analysis of quantitative data using descriptive statistics.
- Thematic analysis of qualitative data.
- Convergent analysis using a NPT lens.

Expected outcomes

- Increase the understanding of the processes of familiarisation with technology by aged care staff in their clinical workspace.
- Inform the development of a framework to describe the process of familiarisation with technology in aged care environments.
- Be a resource for informing future technology implementation and education programs for individuals, organisations, education programs and technology designers.

Timeline



Project contact: Kerry Rigby
Deakin University
rigbyk@deakin.edu.au



Kerry Rigby - Deakin U Deploying Digital Enhanced Living technologies for residential aged care

Ben Joseph Philip - Deakin U

Model-driven engineering of digital enhanced living solutions

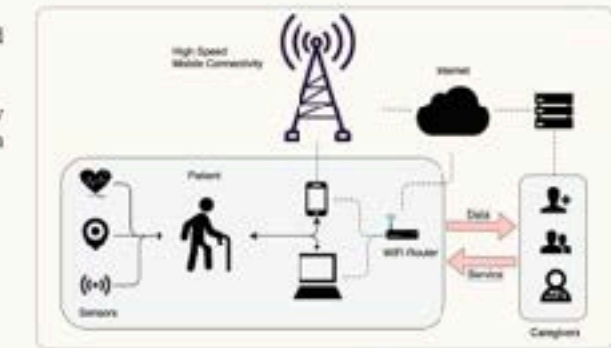
Model Driven Development of Digital Enhanced Living Solutions

Ben Joseph Philip

Supervisors: A/Prof. Mohamed Abdelrazek, Dr. Alessio Bonti, Prof. John Grundy

Introduction

- The mHealth domain is growing rapidly and the development of wearables sensors has introduced a wide scope for innovation.
- Popularity of smartphones makes them an excellent platform for creating health applications.
- Model driven development of applications using a domain specific language is expected to simplify and accelerate application development while also making it easier to include all stakeholders in the design process.

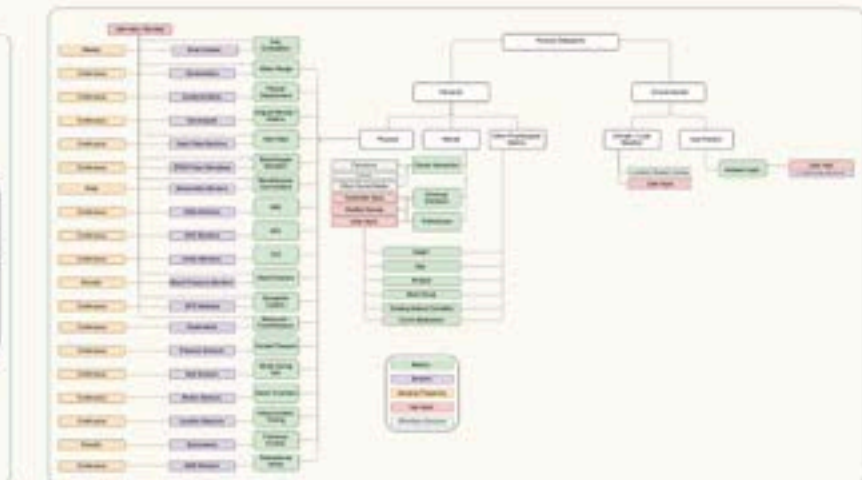
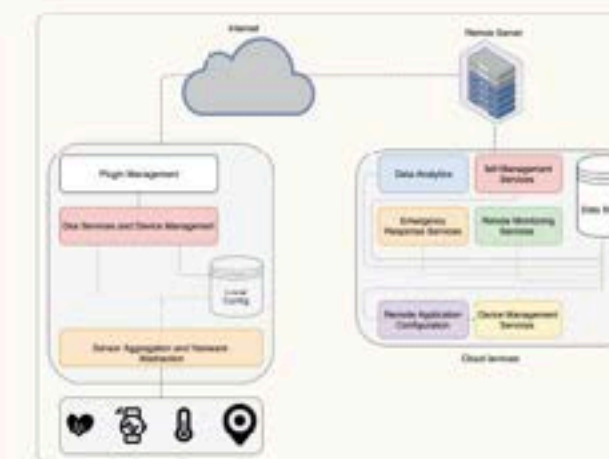


Problems

- Lack of an aggregation platform that integrates several heterogeneous sensors.
- Repetitive application development approach including the use of recycled boilerplate code.
- Poor user experience caused by often repetitive user input and the need to use multiple apps.
- The need to enter similar data into multiple apps with data sharing between apps in its infancy.
- Lack of apps supporting mini apps with a shared data model.
- Proprietary nature of most mHealth applications that use wearables causing compatibility issues.

Challenges

- Technical challenges around mobile platforms, including operating system limitations, system performance and battery limitations.
- Communicating with a diverse array of devices from different manufacturers and supporting future devices.
- Privacy and security issues around personal biomarkers.



Research Focus



- Explore current trends in the mHealth domain with the type of services provided and use of wearable devices, and identify common issues.
- Identifying common health metrics that can be used to better support health management of the elderly and the disabled.
- Identifying requirements to develop a framework for building better health applications.
- Explore model driven application development for this domain using the framework.
- Fragmented domain with numerous sensors and proprietary systems.
- Limited functionality of mHealth systems - most are reference apps and do not support sensor integration.
- Many frameworks developed for combining multiple sensors and to ease application development.
- Applications supporting 'mini apps' suggested to improve user experience and to create a better summary of user health.
- Early prototype created to validate the framework looks promising and requires further exploration.

Early Findings



DEEP GENERATIVE MODELS FOR SMART HOME

Development of new generative models to leverage sensing data within smart home

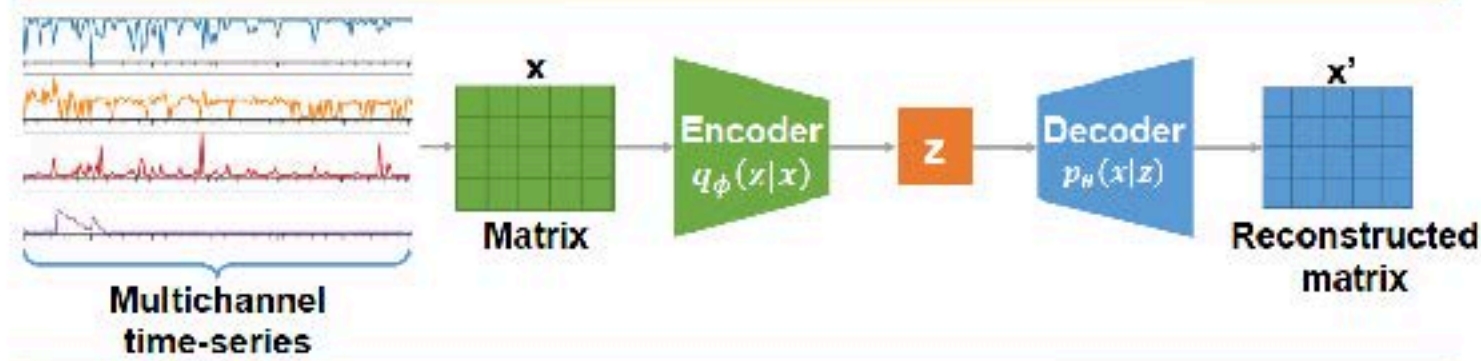
PhD student: Duc Nguyen

Applied AI Institute, Deakin University

Investigators:

A/Prof. Truyen Tran, A/Prof. Santu Rana, A/Prof. Sunil Gupta, Dr. Phuoc Nguyen
Applied AI Institute, Deakin University

Model overview



Applications with matrix input

Duc Xuan Nguyen - Deakin U

Recognising multi-resolution activities in multi-modal, noisy sensory data

Tara Johnson - Deakin U

Understanding and addressing eHealth literacy barriers and enablers

Understanding and Addressing eHealth Literacy Barriers and Enablers Experienced by Older Adults in Utilising Digital Resources to Support Wellbeing: Project Overview

Authors: Tara Johnson, Truyen Tran, Duc Xuan Nguyen, Sunil Gupta, Santu Rana, Phuoc Nguyen, Truyen Tran, Applied AI Institute, Deakin University

BACKGROUND

- Electronic health (eHealth) creates new opportunities to improve health outcomes
- In Australia, the internet has increasingly been utilised for health related purposes with a 24% increase between the 2014-15 survey and the 2016-17 survey
- Older adults (60+ years old) are a diverse population group with unique needs in relation to technology use and engagement; that may be influenced by various age related and chronic conditions
- Countries around the world, will need to consider whether their social and health systems are ready to face challenges presented by the demographic shift of an ageing population
- eHealth literacy is an emerging term; which has expanded into a framework with seven domains¹ that consider the skills and knowledge required to address a health problem with the use of technology.
- Older adults often score lower in eHealth literacy² and are less likely to engage in technology than their younger counterparts³
- eHealth technologies provide an opportunity to delivering healthcare by an alternative means to support the aging population⁴, however developers have a challenging task of meeting the older adult populations wide variety of needs

RESEARCH AIMS

- Describe barriers and enablers of technology use in older adults, with a focus on eHealth literacy, to inform the development of technologies to enhance health and wellbeing in our growing population of older adults.
- Develop eHealth literacy profiles to help developers design technology that is accessible and engaging for older adults to enhance usability

OUTCOMES

The anticipated outcomes of this study in the older adult population include:

- Understanding and addressing the varying barriers and enablers when utilising eHealth, from both an eHealth literacy and chronic condition point of view
- Identify what eHealth literacy domains need to be addressed to improve engagement
- Provide a deeper understanding to the eHealth literacy similarities and differences between medically segmented older adults
- Provide a foundation for technology developers to consider when designing technology and may enable eHealth technologies to be better targeted to stratified sample groups

METHODOLOGY

- Data will be collected via two large existing population based studies (60+ years old) with a focus on exploring the influence of different health conditions, sociodemographic, lifestyle, physical and mental wellbeing factors.
- In addition, eHealth literacy data will then be collected via collaborating on a variety of eHealth technology projects aimed at older adults experiencing diverse health conditions, through the use of the eHealth Literacy Questionnaire⁵. This data will then be used to identify distinct eHealth literacy profiles for older adults participating; in the research, to identify barriers and enablers of each group with consideration to sociodemographic details and medical conditions.
- Differences and similarities between profiles will be explored which will add to the growing evidence base informing the development of technologies.

REFERENCES

1. American Medical Association. (2010). eHealth Literacy: A Guide for Designers and Researchers. *Journal of the American Medical Association*, 303(14), 1666-1674.
2. Australian Bureau of Statistics. (2017). *Internet Use in Australia, 2017*. Canberra: Australian Bureau of Statistics.
3. Australian Bureau of Statistics. (2017). *Internet Use in Australia, 2017*. Canberra: Australian Bureau of Statistics.
4. Australian Bureau of Statistics. (2017). *Internet Use in Australia, 2017*. Canberra: Australian Bureau of Statistics.
5. Truyen Tran, Duc Xuan Nguyen, Sunil Gupta, Santu Rana, Phuoc Nguyen, Truyen Tran, Applied AI Institute, Deakin University.

Building robust smart home systems

Shangeetha Sivasothy

Supervisors : Prof.Rajesh Vasa, Dr.Niroshinie Fernando, Dr.Scott Barnett, A/Prof.Koopak Sinha

Problem & Motivation

Error handling in smart homes is non-trivial due to heterogenous nature of software and hardware, pervasiveness and non-deterministic behavior of occupants. A large number of non-tech savvy users of smart homes brings importance to build robust smart home systems. For example, an elderly occupant getting confused with his smart home because the voice-controlled lights did not work due to an error with detecting his voice. Robustness of smart homes ensures the continual functionality, better user experience, consistent usage and avoidance of false alarms and bridges the digital divide for smart home occupants.

Background

In recent years, smart home systems have been rapidly developed with safety, security, comfort and cost considerations. Robustness is addressed for activity recognition, power scheduling and authentication of smart homes. Machine learning approaches and real time system localized approaches have been used to detect errors in smart homes.

Expected Outcomes

- To catalogue the robustness practices of NLP pipelines
- To develop a process/checklist for improving robustness in smart homes
- To evaluate technique in a real-world setting

Research Objectives

- To understand currently available robust techniques in data processing pipelines of smart homes
- To provide recommendations to Software Engineers to achieve robustness in smart homes

Methodology

- Analyze current NLP best practices in error handling from mining software repositories
- Investigate NLP error handling techniques specified in the literature
- Identify the gap between NLP best practices and existing literature for error handling
- Collect data from smart home application and evaluate the robustness of existing application
- Implement the established error handling process to NLP pipeline of smart homes
- Evaluate the robustness of improved smart home application

Current Progress

Analyzing 40 Kaggle solutions to identify current robustness practices

Timeline



Image Courtesy: <https://shelbyanderson.com/>

Shangeetha Sivasothy - Deakin U

Sensor fusion for personalised models of a resident

Rebecca Nourse - Deakin U

Smart home system for patients with cardiovascular disease

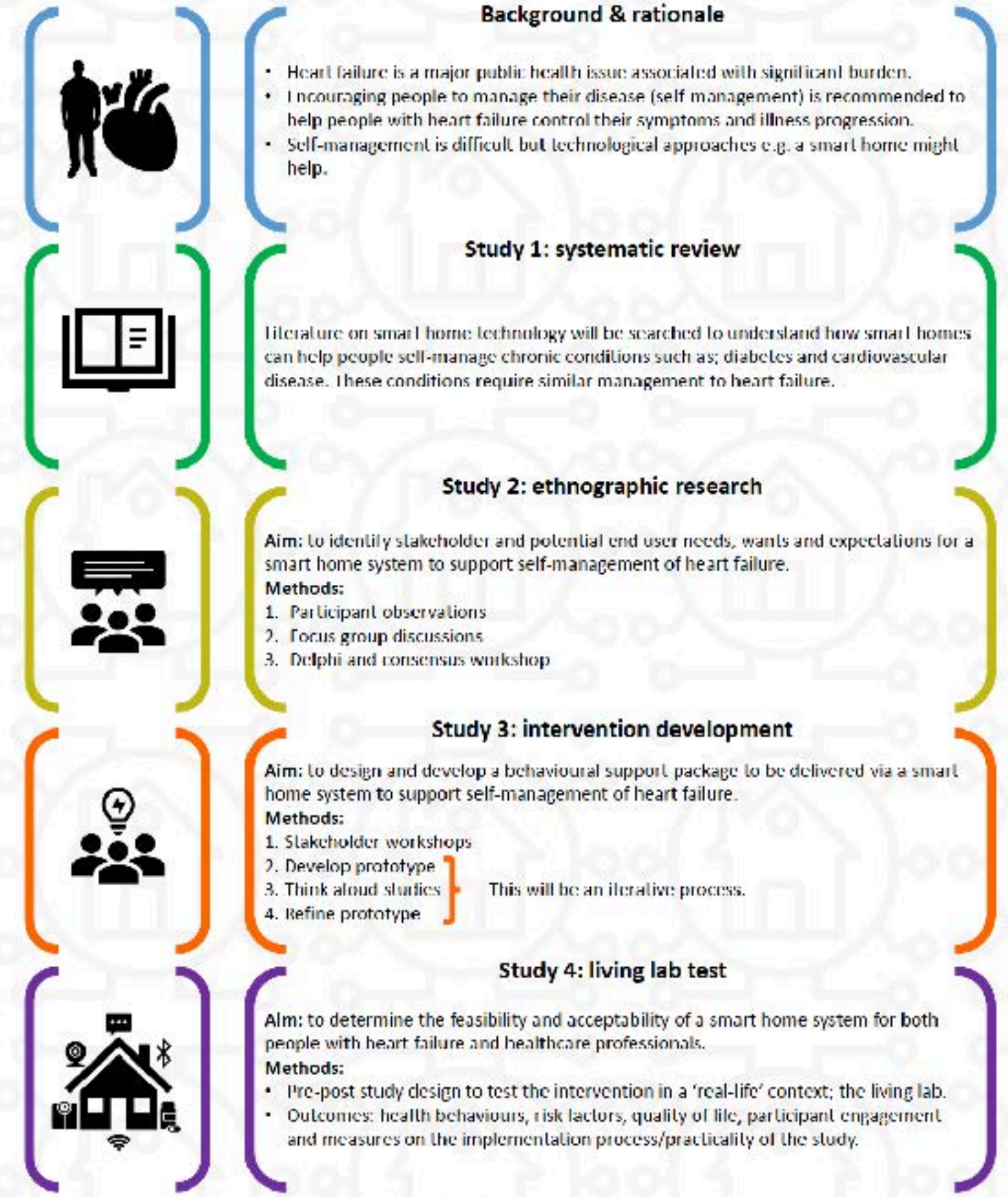
A Smart Home for people with Heart Failure

Rebecca Nourse MSc, BSc rnourse@deakin.edu.au

Supervisors: Prof. Ralph Maddison, Prof. Anne Hrelch, Dr. Shariful Islam, Prof. Rajesh Vasa



This PhD will determine whether smart homes are a suitable, acceptable and feasible approach to support people with heart failure to self-manage their condition.



© Institute for Digital Activity and Innovation (DAI), Deakin University, Melbourne School of Health and Medical Sciences, University of Cambridge, Research Applied Artificial Intelligence Institute, Deakin University, Melbourne

Industry Projects

Industry Partner	Project
Black Dog Institute	Digital Phenotyping & Intervention Platform
Dementia Australia	Avatar - A digital education tool for carers of people living with dementia
Uniting AgeWell	Digital Living Assistant
ACH Group + goAct	Smartphone based system for early recognition of frailty risk in community dwelling for older adults
Interrelate	Assistive technology to provide a greater insight into understanding and influencing online behaviour of children and child development.
Health Metrics	<ul style="list-style-type: none"> Falls Prevention Workforce eCoSystem
Uniting NSW.ACT	<ul style="list-style-type: none"> Sensors, machine learning and detection/prevention of adverse events Person-centred care and complex needs Wearables and falls

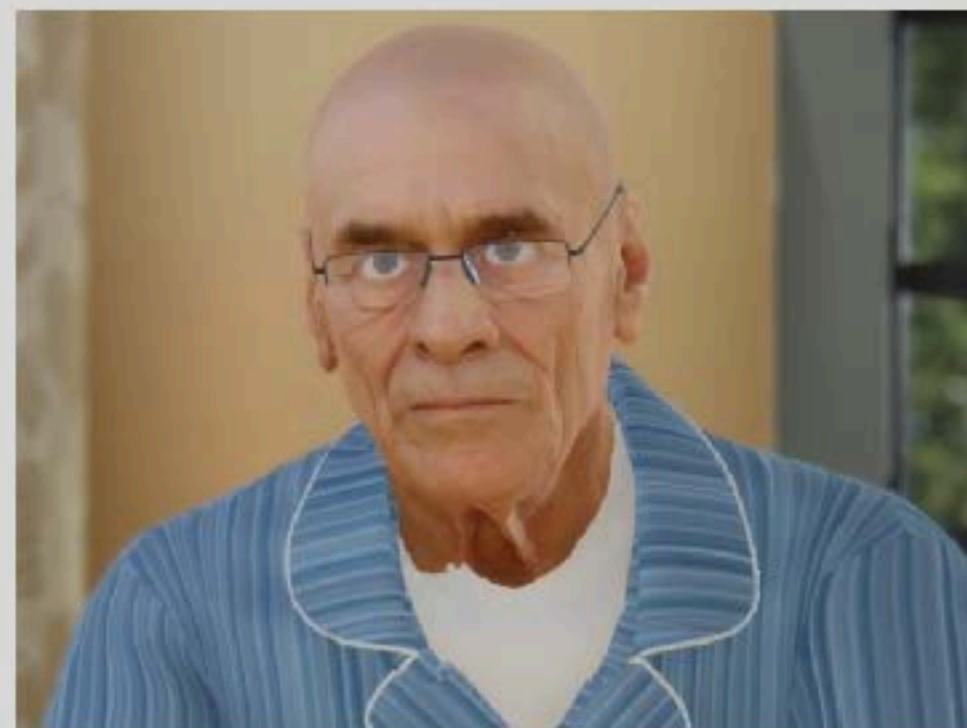
AVATAR - A DIGITAL EDUCATION TOOL FOR CARERS OF PEOPLE LIVING WITH DEMENTIA

Development and evaluation on the use of Avatar on educating carers on how to provide specialised care for people living with dementia

Investigators:

Dr Tanya Petrovich, Dementia Australia

Dr Anju Curumsing, Deakin University



Dementia Australia

Trial findings - a digital avatar can help carers (1) understand the behaviour of people living with dementia, (2) understand how poor communication can trigger changed behaviour, and (3) manage work stress.

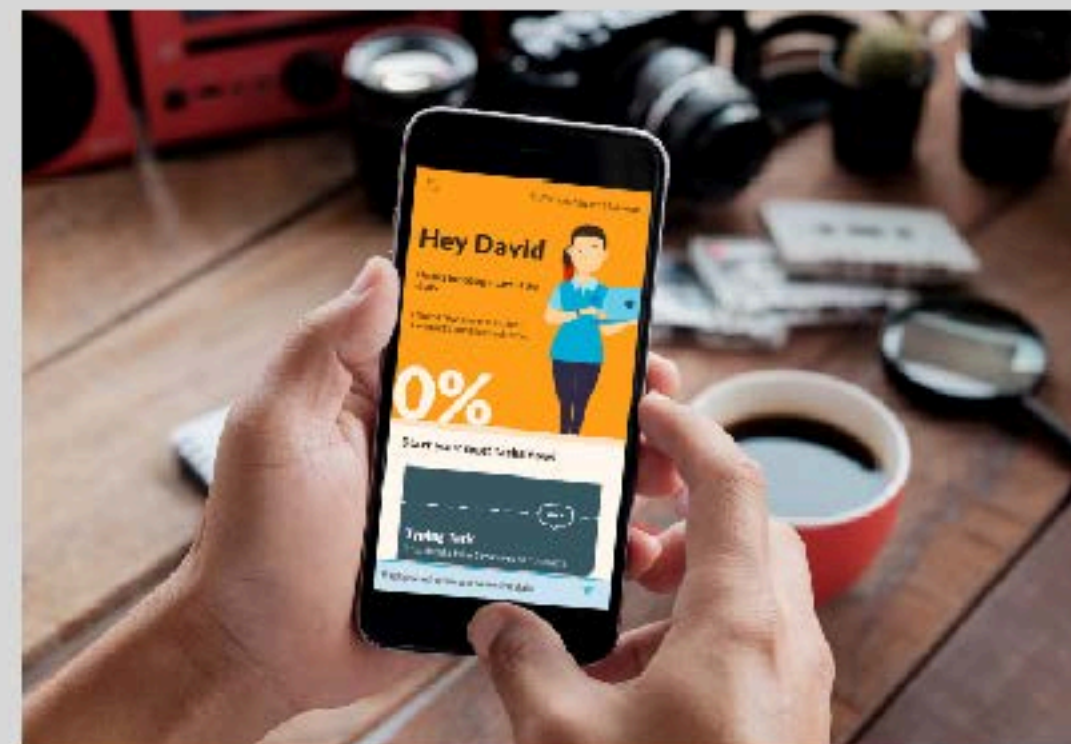


DIGITAL PHENOTYPING AND INTERVENTION PLATFORM

Development and evaluation of an early intervention application for those suffering from anxiety and early stages of depression

Investigators:

Ms Nicole Cockayne, Black Dog Institute
Dr Kit Huckvale, University of New South Wales
Professor Rajesh Vasa, Deakin University



Black Dog Institute

InSTIL - Intelligent Sensing To Inform and Learn

Scalable platform for coordinating research studies that involve 'digital phenotyping' and/or the evaluation of digital interventions delivered using consumer devices such as smartphones.



DIGITAL LIVING ASSISTANT

Development and evaluation of technology solutions in everyday living by senior people

Investigators:

Ms Nina Bowes, Uniting AgeWell

Dr Leonard Hoon, Deakin University

Professor Alison Hutchinson, Deakin University



Uniting AgeWell

Investigation if the features of an off the shelf smart device system (in this case a smart home hub) can be used for a variety of purposes including but not limited to, supporting older person in their everyday activities.

Trial recently completed and data currently being analysed.



SMARTPHONE BASED SYSTEM FOR EARLY RECOGNITION OF FRAILTY RISK IN COMMUNITY DWELLING FOR OLDER ADULTS

Investigators:
Mr John Fouyaxis, goAct Pty Ltd
Mr Jeff Fiebig, ACH Group
Professor Sue Gordon, Flinders University
Associate Professor Niranjan Bidargaddi, Flinders University



ACH Group & goAct

Development and evaluation of a personalised smartphone-based frailty risk monitor for early recognition of frailty risk in community dwelling for older adults.

It integrates various data sources captured from the community-dwelling population.



delh.com.au



Health Metrics



Thank You

