



Reconnect

IDES 2020.

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Design book compiled for the UNSW Industrial Design graduating class of 2020

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FOREWORD

As designers, we have the power to change the way we perceive our built environment by designing products that educate people and raise awareness of the challenges we collectively face.

Many viewed the COVID-19 pandemic as a grim start to the decade. While it fundamentally changed the way we live, work, and play, it has also brought about new opportunities that have paved the way for designers like us to embrace new technologies, taking on an inventive and smart approach to design by combining technology with craftsmanship.

Design and technology work in tandem to orient itself to changing social and political environments or show concern about environmental crises and climate change. As designers, we facilitate works like the honours capstone project that can sparks debate between people and objects, as well as objects with other objects. Through design, a deeper level of human connection is possible by bridging the roots of design with new technology.

Therefore, "Reconnect" is the culmination and exploration of these values showcased through the diverse capstone projects undertaken by the graduating class of UNSW Industrial Design (Honours) 2020.



I M A G I N E //

C R E A T E //

I N S P I R E //

FOREVER TOASTER

Cameron Brown



The Forever Toaster is an everyday toaster designed to never need replacing. It is a direct response to the lack of repair and lifespan analysis, particularly within electronic and household appliance products. This design opposes planned obsolescence and replacement strategies through durable design and considered lifespan.

This toaster is made of extremely durable materials, built around a cast aluminium chassis and stainless steel housing. It is also designed to be easily disassembled for repair, maintenance and upgrade to further extend the product lifetime.

Small household appliances are often disregarded when it comes to repair and durability. The forever toaster aims to build more emphasis on the life cycles of everyday products, beginning with the humble, everyday toaster.



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K-BLOCK

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K-BLOCK is a compact kitchenette that is designed for micro-apartment, encouraging home cooking, and enhancing cooking experience for the residents with an urban lifestyle.

In the coming decades, the size of city apartments is reducing. Rooms are getting smaller, and the kitchen becomes the first one to shrink. The busy but convenient urban lifestyle changes the cooking culture in the kitchen area: "People love cooking, but they don't have time".

Kitchen is the centre, the beating heart of home, it is not just a place for your everyday meal, it also creates enjoyment for individuals and social bonding with others. Kitchen should be social and multi-functional, as a space for family and friends to spend time together, a place to cook and eat, and a place to work as well.

Through the design feature of K-BLOCK, residents who live in micro-apartment can save up more space and have a better option for cooking at home.



Caitlin Duffus

Mycelia House is a functional, beautiful and simple vessel that showcases the beauty of mushrooms and supports its growth within the home. It aims to reconnect us with our innate nature - our human nature, through the display, caring for and nourishment of mushrooms as a living entity and as a food source.

As naturalist Erin Verinder puts it "we are waking up from a long slumber of disconnectedness. Remembering that we are made up of the same materials as nature. There is simply no separation". As we have evolved to live in urban areas and are currently experiencing the covid 19 pandemic, we are noticing this disconnection and are craving a deeper relationship with ourselves, the natural world and our daily routine. We are seeking products that we can connect and emotionally relate with. With trends arising in the localization of food production and DIY alternatives, as well as a love for houseplants, the concept for mycelia houses was manifested.

Whilst mushroom grow kits are currently sold to a DIY market of hipsters, an opportunity surfaced to design for a new market of higher income earners who are interested in wellness and are willing to invest in sustainable alternatives. These are creatives who have a love for nature and being outdoors, although they live and work in urban areas and struggle to find time in nature due to their busy lifestyle.

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glass blowing

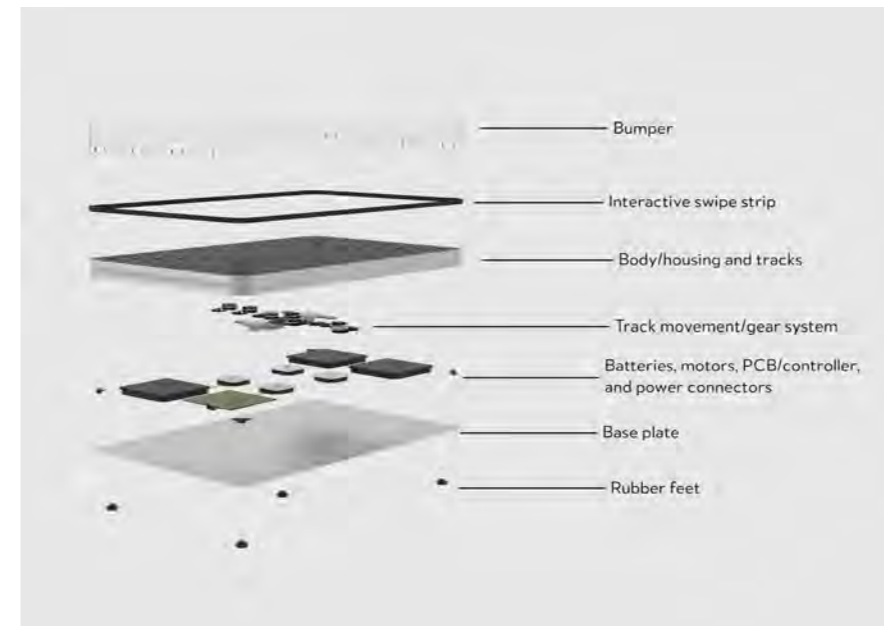
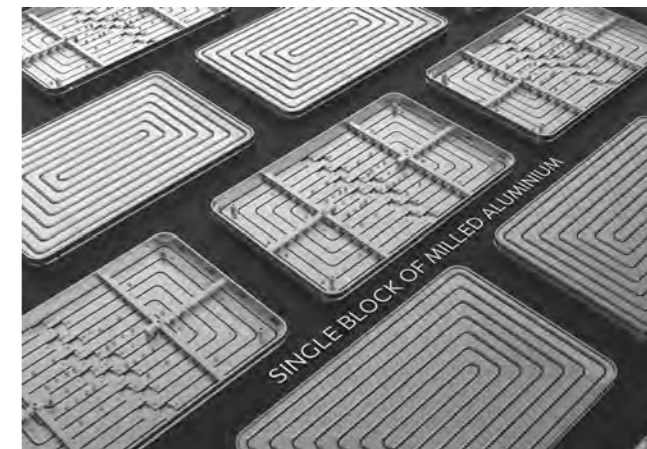
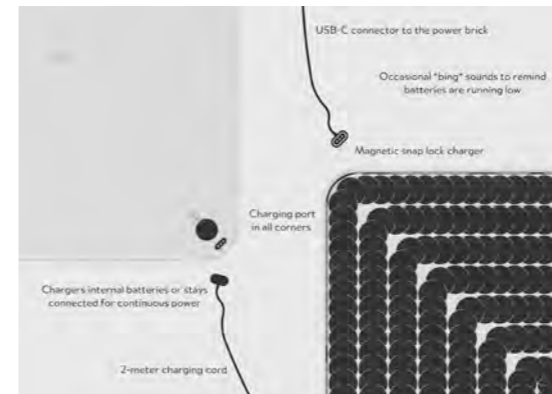


TURNTABLE

Noah Elmes



TurnTable



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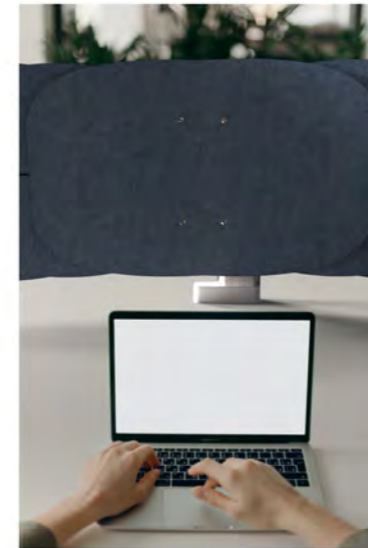
TurnTable is a space optimising product that brings technology into the corners of your house.

With the ever-increasing population and limited space in major cities people now more than ever are looking for ways to utilise every available space. With the rich leading the way to the new and different, eventually making it more affordable for others.

TurnTable is an innovative successor to the lazy susan, bringing it into the 21st century. With multiple layers of tracks that move together to shift items placed on them out of the corner of the cupboard and into sight/easily accessible space.

EXPANSE

Anthony Franco



In small office environments, space and privacy are a premium. Open-plan office designs often favor the support of collaborative tasks at the expense of focused, private individual work when space is limited. For employees to stay productive, the personal management of privacy and collaboration is key to their success. This involves the management of meaningful interactions and conversely, limiting distractions. To achieve this, employees require their workspaces to be adaptive, flexible, and easy to use. This enables them to efficiently create work environments that allow them to work productively in minimal time. Existing solutions to this problem do not consider social etiquette, subtlety, and convenience of use.

'Expanse' allows users to choose when they want to work collaboratively or privately. When 'Expanse' is open, it not only provides visual and sound privacy, but also acts as a 'social barrier', as it is able to visually communicate that a person is doing focused work. This creates a culture of respect in the office for an individual's privacy needs and allows a small space to transform into a private enclosure when necessary.

'Expanse' is controlled by a timer which allows the user to block-out set periods of time to complete their focused work and give comfort to other employees that the user will be available soon. Additionally, because the product is

motorized, only a small twist of the dial is necessary to move the divider, reducing the effort and social pressure to appear collaborative. As the divider opens, the sound-absorbing, heat-formed PET felt panels move from a flat surface to a curved screen that gently hugs desktop computer monitors, providing a greater sense of enclosure and privacy. This creates a harmony between function and theatricality that can only be achieved through robotic furniture. Stepper motors and silent drivers allow 'Expanse' to move quietly and smoothly, essential for quiet workspaces.

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Around 1.7 million Australians have been diagnosed with diabetes, it is one of the biggest challenges affecting Australia's health system, according to Diabetes Australia 2020.

Flex is an insulin pump device which stores an insulin pump, designed for Type 1 diabetes female patients. Unlike any products currently in the market. Flex provides a tubeless, waterproof approach to diabetes management. It is a soft flexible strap with advanced smart technology to connect with diabetes patients, creating a carefree and comfortable solution of monitoring insulin consumption.

Flex allows Type 1 diabetes patients to do sports activities without any constraints. Especially targeting female users who struggle to wear their pump with the risk of tangling long tubing and bulky sizing of the pump device has limited their clothing/ outfit choices. Therefore, I've taken lots of inspiration from sportswear and gym accessories during the design process, in order to make the pump look more fashionable and get out of the medical device sigma.



This tubeless insulin device is inspired by Omnipod system and mechanism which consist of the pod and personal diabetes manager (PDM) designed for wireless insulin delivery program. Made to be convenient and discreet, the Pod can provide up to 3 days of continuous insulin delivery.

Product Features:

- Adjustable strap length according to user's arm size
- Flexible soft silicone strap with dotted pattern texture on top
- TPU base which protects the components and soft on skin at the same time.

Demonstration Steps:

1. Simply insert the new insulin pump part into the hollow of the arm strap.
2. Place the silicone strap around arm. After securing it, press start on the flex app to activate the insulin pump.
3. Insulin reservoir automatically prime, soft cannula (micro needle) then inserted into skin in 45 degrees to begin insulin delivery.

Dedicated Mobile App:

Flex has a dedicated app which connected to the insulin pump via Bluetooth for users to control their insulin delivery, from bolus settings to suspend and resume the insulin pump. With just a few taps on app screen, insulin will be automatically primed and injected into user's arm in a safe and most comfort way.





OVA

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Ova is a home air filter that is made of high quality yet affordable materials without the use of high-end technologies. Ova is detachable, can be moved to any rooms at your home as you desire. Once attached to the base, it automatically charges until full capacity.

This product has a self-maintaining system – it sucks air from the bottom by high-powered traditional fan and air will be filtered through two types of filters; that is HEPA filter that filters particles smaller than 0.25µm which is the smallest coronavirus particle, and activated charcoal filter which eliminates odour and toxins. Air will be blown out through the triangular-angled design that allows air to circulate more evenly throughout the room.

Ova can be considered as another 'window' at your home, it improves ventilation as well as air quality. With the simple and minimalistic design, it makes Ova more versatile for any interior designs and makes a beautiful home décor.



Jesslyn Johanna



As humans spend most of their time indoors, we breathe in more harmful pollutants than we do outside as enclosed space traps pollutants inside. Thus, air circulation and ventilation are needed to combat indoor air pollutants. However, current purifiers are highly unsustainable and their filters need to be replaced every 6-8 months. Although perceived negatively, microalgae possess a lot of values that could combat air pollution and climate change. In fact, 1L of microalgae is as effective as 25 plants.

Additionally, microalgae allow humans to reconnect again with nature in this advanced digital age.



However, society's negative perceptions of microalgae have hindered them from utilizing their values and rather would remove them from their lives. Thus, LUMU aims to change users' perspectives about microalgae while negating indoor air pollution.

LUMU is composed of microalgae and a natural filter that purifies the air and allows users to wirelessly charge their phone and place their belongings in the attached plate; a combination of nature and technology. LUMU focuses on four values that would help create a positive image of microalgae: aesthetically pleasing (form), therapeutic (nature connectivity), interactivity (growing experience), and improve understanding (mobile application and growing experience). Those values come from the mindset of, "Why do people like potted plants and not microalgae?" and what I have gathered from research and interviews with planters.

LUMU ensures simplicity in growing microalgae and enhances user experience through the mobile application. Furthermore, aside from filtering the air, unlike other air filters, LUMU produces oxygen through microalgae.



MOBILE APPLICATION

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SHINRINYOKU

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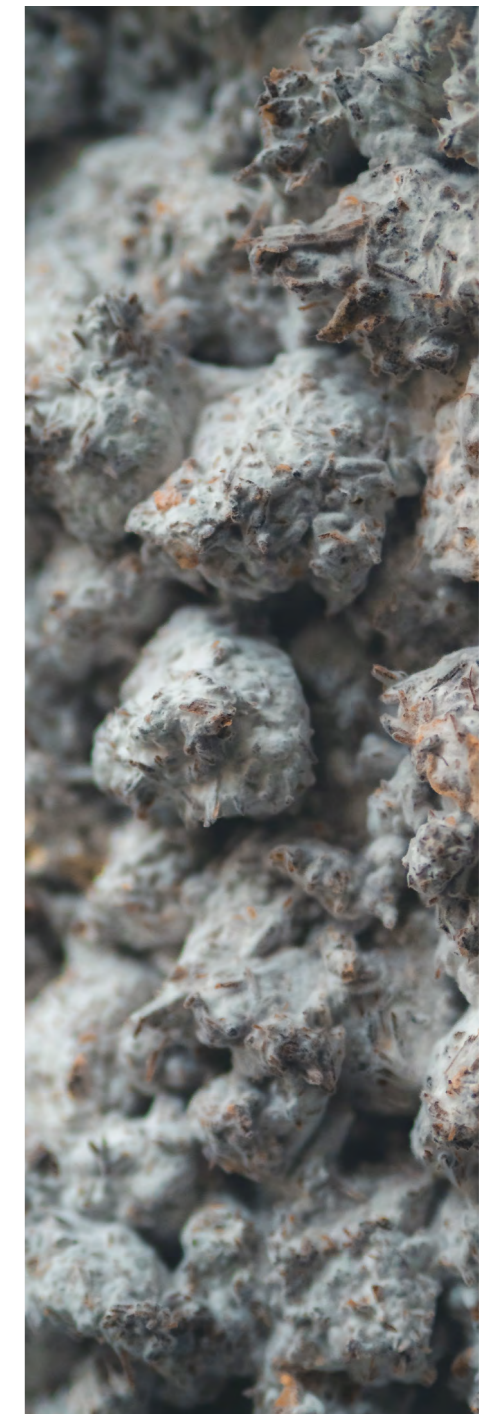


The start of this decade has witnessed and experienced one of many detrimental effects caused by climate change with some of the worst natural disasters to date. The Australian bushfires of 2020 is the worst bushfire that the world has ever witnessed, and has burned through 12 million acres of land, killing over a billion of animals in the process.

Soon after, the COVID-19 virus became a worldwide pandemic that has infected over 48 million people and killed over 1.2 million in its process, and this was a result from industrial farming of animals. These events are prompting designers around the world to seek for a new design alternative to tackle these global issues.

This has prompted the uprising of Biodesign, and Project Shinrinyoku endorses the utilization of mycelium in the context of a family of stools. The three stools (Mori, Kinoko, and Kuuki) utilizes mycelium to demonstrate the potentiality as a material, evokes provocative conversation, and creates an entry market stool that consumers can get their hands on as a product.

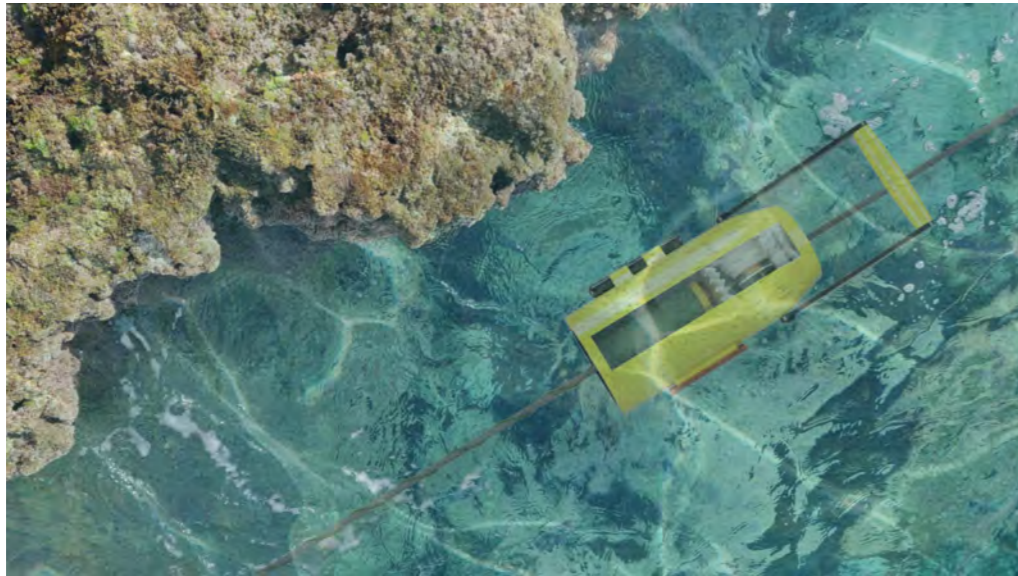
The main aim of the stools is to educate, raise awareness, and present design opportunities to potential investors of the emerging field of Biodesign, in the context of mycelium in an industrial designed product of a stool.



GUIDELINE

Kelp Seeding Planting Aid

Genevieve Lam



From the results of high rates of carbon emissions leading to global warming, our underwater rainforests, otherwise known as Giant Kelp Forests are at the brink of extinction. GUIDELINE is a Kelp Seed Planter Aid, designed for a site-specific Giant Kelp Forest Restoration project, held by the University of Tasmania and IMAS.

It is a product solution that reduces restoration divers' strain from laboriously wrapping the kelp seedling line around the restoration (farming) line; while increasing the efficiency of planting Kelp Seedlings for restoration.

GUIDELINE is inspired by the traditional and proven method of Kelp cultivation in the industry, which involves threading a PVC Kelp Seedling line along a free-floating farming line. This act allows the seedling line to naturally wrap around with minimal human interference with the seedlings on the line.

By utilizing the functionality of a classic bevel gear, with large (leader) and smaller (follower) gear; With the former rotating along the X-axis, and the latter

rotating around the X-axis. In this project, the leader follows along the enclosed site restoration line, whereas the follower attaches to the line and acts as a spindle which pivots the Kelp Seedling line around the restoration (farming) line.

Essentially like following the leader or like a guide dog, with the diver acting as a driving force/guide, GUIDELINE trails behind the diver as it swims next to the restoration line, intertwining the two lines with minimal effort increasing rates of productivity and reducing workers strain.

Additionally, the housing of GUIDELINE is not only used as a protective shell for both the kelp seedling line and gears but also lifts the farming line from the rock-bed and removes debris from it, reducing the potential risks that could prohibit the growth of the kelp seedlings.



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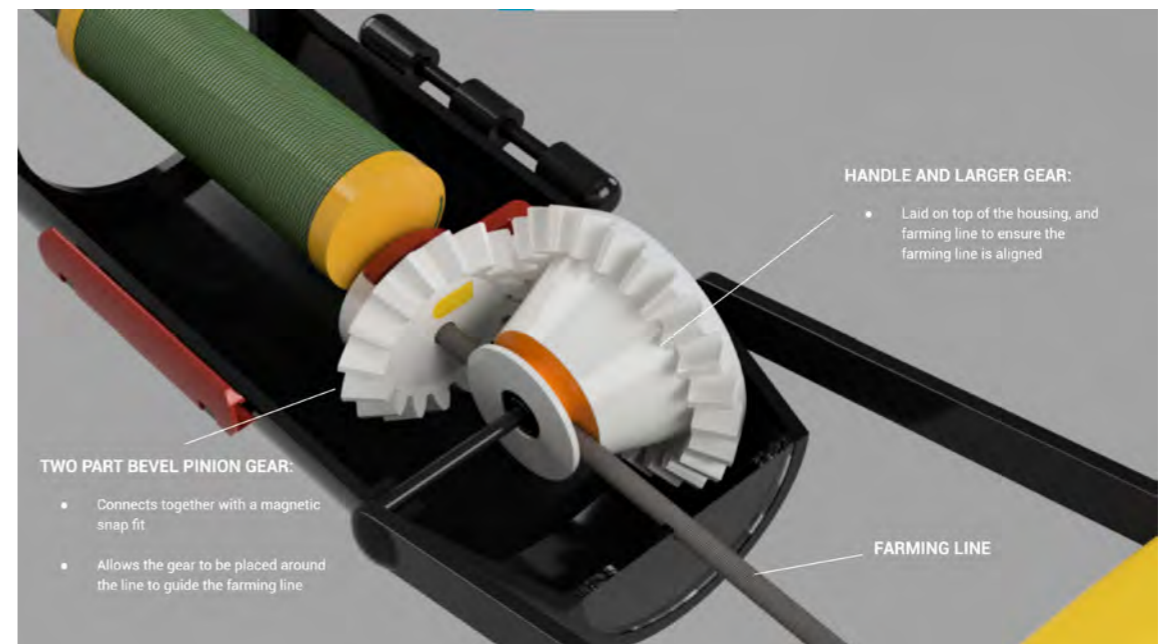
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E-RECYCLING

Yolanda Law



E-recycling is an e-waste collection system for everyday Australians who need to recycle their electronic goods. Available for collection at your local post office, electronics store and institutions, e-recycling provides a solution to managing the growing number of electronic consumables in our society.

This self-maintaining system provides a stress-free solution to managing e-waste recycling within the community tailored for ease of use by stakeholders including hosting businesses, delivery, recyclers, and customers.

With accessibility and convenience at the forefront of the design, e-recycling provides quick, easy to use collection units, giving you a peace of mind that your e-waste is being treated properly with ethical recyclers.

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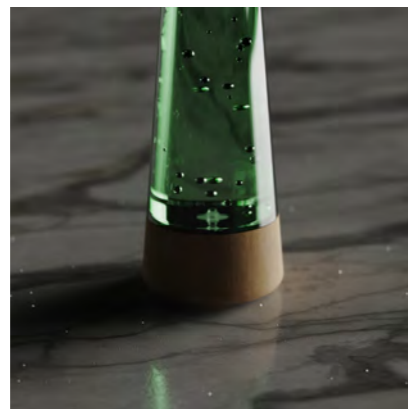
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HISA

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People are spending more than 90% of our time indoors, even more so with the COVID pandemic. With rapid urbanisation and overpopulation in our probable future, city dwellers are facing higher density living environments and getting more segregated from nature, along with physical and mental health concerns.

Thus, an opportunity arises to bring nature into urban homes, and to reconnect city dwellers with nature. However, this time, let us experience growing something different from pot plants - what about microorganisms?

2.5 billion years ago, cyanobacteria entered the stage of Earth and invented photosynthesis that led to the rise in atmospheric oxygen, and later the great evolution. As a member of cyanobacteria, Spirulina is regarded as a superfood for the future. There has yet no product designed for growing Spirulina in domestic environments.

After experiencing popular DIY set ups, multiple user pain points are identified, such as prolonged workflow and the lack of aesthetic considerations.

HISA is a domestic cultivation device for Spirulina, one that seamlessly integrates all equipment necessary in a compact design. Users can now ensure adequate air circulation through the Spirulina culture by simply placing the jar on the air pump base.

As the modular rechargeable LED sheds light on the meditating waves of Spirulina, HISA is transformed into a dynamic ambient light. HISA aims to improve usability and to provide an enjoyable experience of nature, as an early step of introducing Spirulina into urban homes.

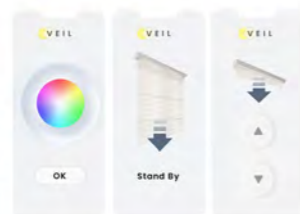


“However many dividers currently in the market are bulky and stationery, often blocking out sunlight, which is crucial, especially in smaller apartments.”

Veil is an android controlled, and transformative spatial divider that strives to provide separation for various functions within a single room. The veil is designed with space-saving capabilities in mind.

Retaining a discrete appearance, Veil descends from the ceiling only when privacy is needed. Veil’s screen design has been inspired by the beauty of kirigami folds, which are made of thin translucent coated fabric, accommodating the flow of natural lighting.

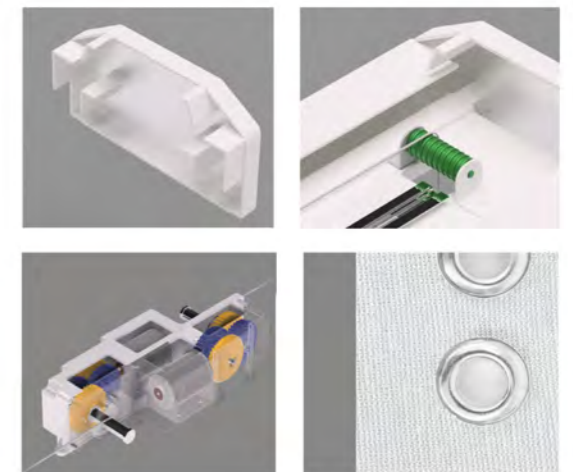
Veil’s minimalistic approach to design aims to provide a seamlessly integrated solution that is versatile and can be arranged in multiple scenarios, creating harmonious living spaces.



Future of living arrangements is becoming a hyperdensity scenario resulting in smaller shared living spaces. By observing and interviewing families living in smaller apartment scenarios, I come to an understanding of how families share and adapt to open plan living arrangements, utilising the living room at different times of the day to allow leisure and study.

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Privacy is especially crucial for people who work or study at home, as sharing common areas could result in passive distractions and unwanted micro-interactions. My findings highlight the issue of inadequate spaces for privacy for each family member. There is an opportunity to elevate shared living arrangements through spatial division as well as visual privacy.



ICU TOWER

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Designed in collaboration with Prince of Wales Clinical Engineering & Intensive Care Unit as well as Dr. Miles Park – Senior Lecturer of UNSW Industrial Design. The ICU Tower is a free-standing mobile equipment cart tailor-made to transport vital life-support equipment – most notably, the Ventilators being used to save COVID-19 Patients.

It is a crucial component of the Prince of Wales Hospital unique ICU experience in which patients are assigned a single set of equipment from admission to discharge – providing operational advantages and better quality of care.

The project involved iterating on the existing solution and early stage prototypes. The Scope of Works involved; user experience, optimising for Manufacture, power distribution and management, towing to a Hospital Bed, WHS Safe handling considerations, and infection control

This prototype of the ICU Tower was produced in the UNSW Design Futures Lab using 316 Stainless Steel. Production involved extensive 3D CAD Documentation, Mandrel Pipe and Sheet Metal Bending, Metal Laser Cutting, Tig and Spot Welding.

This project is ongoing, pending internal validation of a prototype by the team at Prince of Wales Hospital.



LIBATION TEA SET

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Hybrid design holds potential for enhancing emotional attachment in product design.

Craft practices are being redefined by digital fabrication technologies that are reimagining and reinventing material practice. Hybrid Design is the merging of traditional craft practices, forms and qualities with those of digital fabrication.

This marriage of craft and technology is a design process used to explore new ideas and new languages within experimental design. Hybrid design seeks a dialogue between digital fabrication and traditional craft practices in a time where contemporary consumers desire products that arouse emotion and provide meaning. By merging craft with digital fabrication, Hybrid Design questions established design making practices and opens up a new dialogue about emotional value.

The 'Libation' teapot incorporates 3D clay printing and wool weaving to inspire an emotional connection with its user through a nostalgic 'tea cosy' aesthetic and design narrative. The 'Libation' teapot is an heirloom artefact with emotional and material value that creates an intimate engagement between the user, maker, the material, and the product. The 'Libation' teapot explores a new ritual and intimate user experience around sharing tea.





FLARE

PENDANT LIGHT

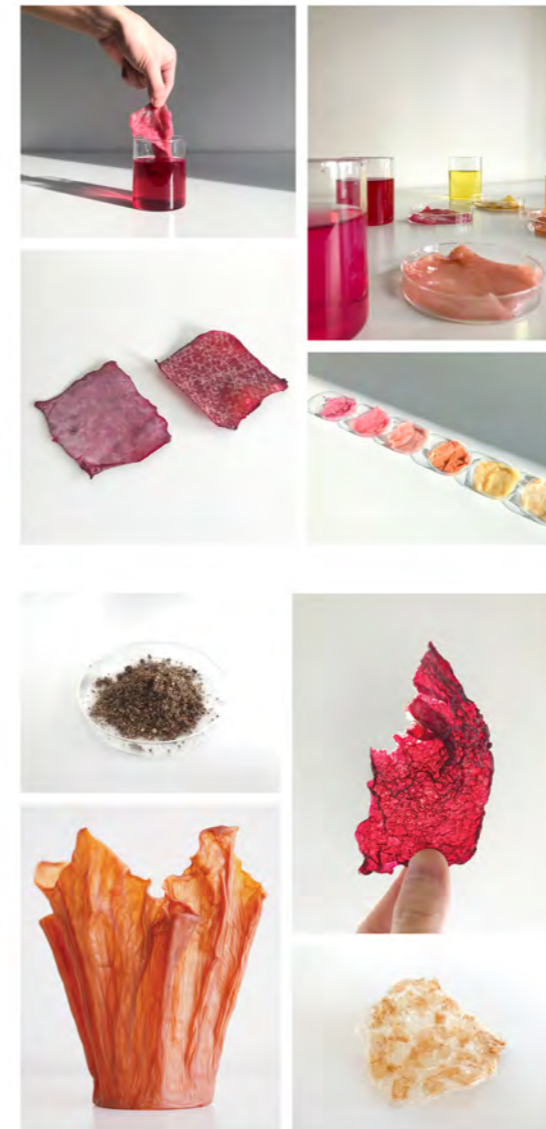
Throughout history, the quality and performance of a material or product was evaluated primarily by how these objects addressed the needs of the user. This thinking failed to acknowledge sustainability factors such as resource scarcity, carbon emission impacts, and the product life cycle.

As a result, the consequences of unsustainable manufacturing have generated detrimental effects to the environment from plastic pollution to the abrupt loss of biodiversity.

For this reason, this biodesign project proposes a novel and sustainable alternative that challenges conventional

materials used in product design. Through the exploration and experimentation with the living material SCOBY, a pendant light was designed to display the material's most intriguing properties and prospective uses.

This project does not follow the conventional design process of defining a problem and designing a solution for it. Rather, it is a material-driven process where you begin with a material, focus on understanding its qualities and properties, then create a superior product by finding its best application.



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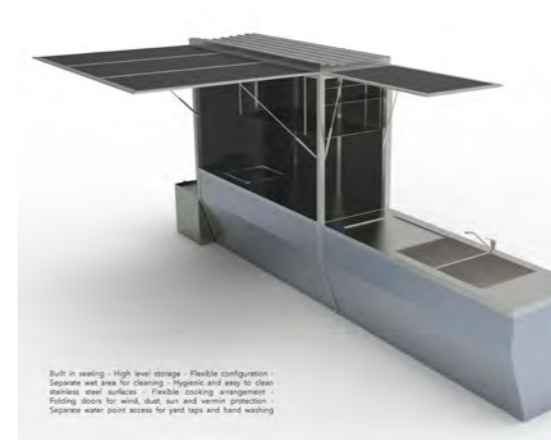
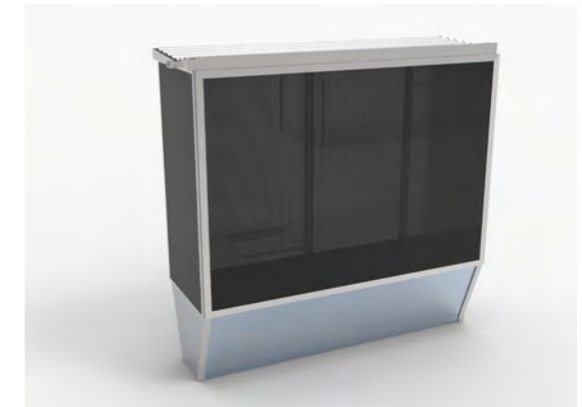
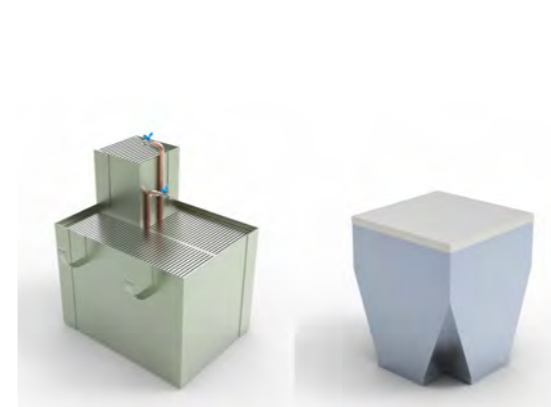
Wei Pan

HOPE

Lily Peel



Hope.
An outdoor kitchen designed
for the Australian Climate.



There is a vast gap between the health of Indigenous and Non-Indigenous Australians. As of 2018, on average, Indigenous Australians were dying 8.2 years younger than their Non-Indigenous counterparts (Australian Associated Press, 2020).

The correlation between hygiene and infectious disease has been known for centuries, with poor environmental living conditions having a considerable impact on the spread of infectious disease. Inadequate or poorly maintained houses and the absence of functioning infrastructure, such as a working wastewater system, pose serious health risks to both adults and children living within these environments. The Healthy Living Principles (Hyperlink to <https://www.healthabitat.com/what-we-do/safety-and-the-9-healthy-living-practices/>) are a simple set of guidelines developed in the late 80s which outline the different ways in which infectious disease can be reduced within the home.

Through having access to functioning health hardware such as working taps and a functioning wastewater collection, homes are able to perform each of these Healthy Living Principles. Therefore the pool of infectious organisms can be reduced, helping to decrease the rates of infectious diseases within the home.

Hope looks to explore how the yard area can be developed in order to help alleviate stress on the house caused by overcrowding. While each household may suffer from the same overarching health issues the way that each household interprets these issues is unique.

Issues within Indigenous housing does not have a one size fits all solution because every household has different needs. Each house is located in a different climate zone, has a different orientation and existing yard lay out and different people living within.

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Therefore, Hope is an outdoor kitchen that takes the form of a 'kit of parts' that has the ability for the Healthy Living Principles to be fulfilled in a dignified way. Hope can be assembled in an arrangement that suits that individual household, be it based on the environmental factors of the yard area such as prevailing winter winds and summer sun, or the cooking and living habits of that household. Robust and commercial grade materials have been used in Hope's design to ensure that she survives the harshest of Australian climates, as well as the intense and constant interaction between the user and the different elements of the kitchen. Hope is designed for the harshest Australian Climates. Specifically looking at the hot arid climate zone of Central Australia. She is designed to withstand these harsh environmental conditions with limited maintenance, allowing her to survive for generations yet to come.

LEVER WEEDER

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cutting and physical pulling back on larger weeds causes immense strain on the user's hands.

The Lever Weeder provides weed management of crowning grasses at a reduced strain on the body, minimise disturbance of surrounding land, and at total elimination of herbicides required for its use. Because of this, the product can be used by a wide variety of individuals, including the vast number of land holders at retirement age, and volunteers who do not possess herbicide certifications.



As the majority of current weed management equipment available has been designed for the needs of other industries, Bush Regenerators continue to rely on a high degree of time, physical effort and skill in their application to achieve desired results.

The Lever Weeder is a specialised weed management solution for Bush Regeneration personnel that improves efficiency of their practice and overall outcomes. This tailored solution will be equipped to meet specialised needs for targeted applications and robust functionality, of which are lacking in currently-used broad-spectrum equipment and domestic weeders designed for other industries.

The Lever Weeder is a solution intended for the targeted removal of crowning grasses and other weed species, such as broad-leaf paspalum, bahia grass, parramatta grass, serrated tussock and climbing asparagus. Traditional removal of these weeds requires prolonged crouching and bend-over positions. The nature of the removal not only causes strain on the back and knees, but the



KIDSIP

James Savva



KidSip is a bottle designed for children with chronic kidney disease to facilitate restrictive fluid control. Fluid tracking technology allows children to be aware of their own liquid intake, reducing the burden on parents.

The lid of the bottle can be removed, flipped and used as a cup. Liquid can be poured through the easy folding spout to be tracked, which can be folded to avoid being obtrusive while drinking. Filling the cup to the bottom of the thread measures half a cup (125mL) of liquid, providing an analogue visual.

Feedback is displayed through LED lights to show the current percentage of the user's daily liquid intake. When in close proximity to a phone the cup can connect to an app to give a more detailed report.

Components of the bottle are removable for effortless cleaning. The charging mat organises the parts in a simple layout to dry and charge for the next day.



Fluid Tracking

Simple fluid tracking technology for children with kidney problems, to facilitate restrictive fluid control.

Multiplepurpose

The lid of the bottle can be removed and flipped to be used as a cup. Liquids can be poured through the easy folding spout to be tracked.



Functional Organisation

Components of the bottle are removable for effortless cleaning. The charging mat organises the parts in a simple layout to dry and charge for the next day.

Diverse Functionality

The cup allows children to drink anything they want freely. Filling the cup to the bottom of the thread measures half a cup (125mL) of liquid, providing an analogue visual.



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Haven is a temporary sanctuary for small shrubs and forest-dependent species in urban environments. Its formwork offers shelter and nesting space whilst its aesthetics allude to the desires of city dwellers. It acts as an intersect between public art, design and wildlife conservation, and simultaneously compliments the infrastructure on which it is placed.

The product aims to re-vitalise existing structures to function in a more meaningful way. Haven can be injected onto any flat surface in a variety of colours and arrangements making it highly adaptable and modular. Product location and distribution requirements will be specific to local bird populations and climatic conditions. In order for Haven to be most effective, it should be placed within ecological corridors ensuring it acts as a stepping stone between habitat patches.

The motivation to create Haven stems from the desire to celebrate biodiversity in cities; to design against extinction. City biodiversity is crucial in creating resilient, healthy and sustainable living environments where all species benefit. As Sydneysiders begin to take notice of Haven on their daily commute to work, they will develop an appreciation and awareness of how cities can also provide opportunities for species other than us. This will inspire and promote understanding that will develop equity between human and non-human species. The lack of products that target biodiversity also emphasises the need for radical collaboration and experimentation in cities. And it asks us to question, how might we enhance rather than endanger the lives of vulnerable urban.

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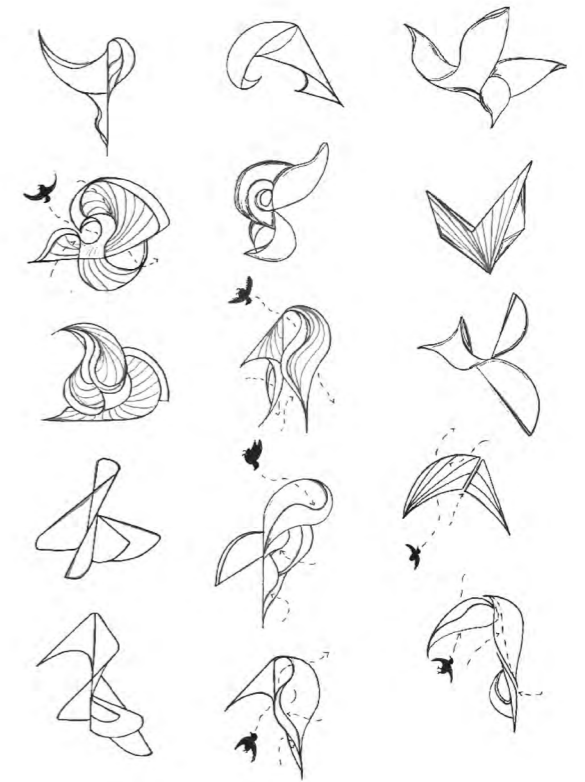
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Design to assist seniors who are living independently and pursuing modern interior design to have easy access or reach unreachable objects, products with movement such as pull down shelves, could promote independence, enjoyment of life, and allow seniors to take control of their living, especially enhance their dignity.

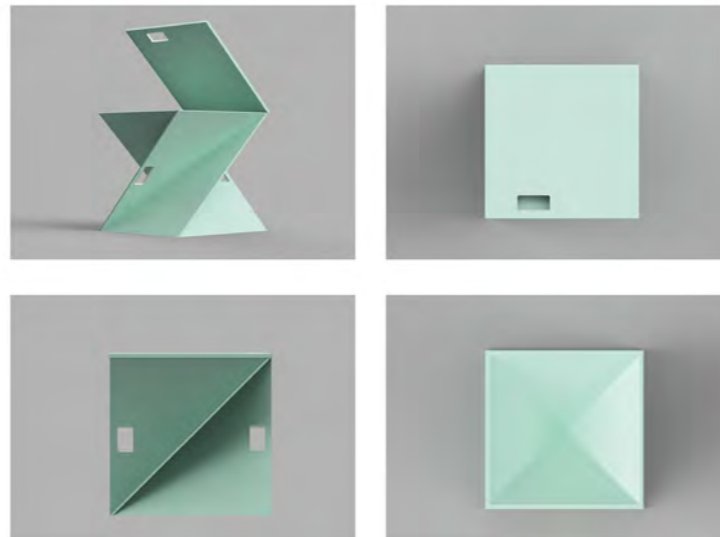
Existing assistive product designs are stereotyped and repetitive. Users of these products complained that they don't want others to treat them as an elderly. They knew that being old and weak is a truth. However, they just don't want to reveal this in the product that they are using.

Horizon is a pull down shelf that allows seniors to take and store their things effortlessly, along with easy installation, various customization and a modern design form to enhance user's dignity. Prevent future falls and physical declination.



PYRAFOLIO

Jeremy Tan



Project Pyrafold was an experiment into seeing how Kirigami (a form of Japanese paper folding) can be integrated into products to provide a compact solution for certain furniture. As urban density becomes an ever-increasing topic, the growth of cities and people have transitioned the idea of space, from something that everyone could freely have, into a precious commodity that is often restricted. As space becomes more valued as time progresses, so do the things within that space, and this translates into an abundance of products that are now focused on compact, space saving and foldable designs.

Kirigami is very mathematically based, which in turn, results in a lot of complex yet beautiful geometric patterns. These patterns are often able to transition from 2D to 3D forms, which I incorporated into the pyrafold chair. It has quite a recognisable aesthetic due to its mathematical foundation, which allows it to fit within many modern contexts in both indoor and outdoor settings.

The main aim of this project was to see how kirigami could be applied to products (in this case – furniture – chairs), but it would be really fascinating to see how kirigami could be applied in lighting and audio design which is a desire of mine.

To sum this up, Pyrafold was an interesting experimental project – to make a portable, foldable, space saving chair inspired by Kirigami.

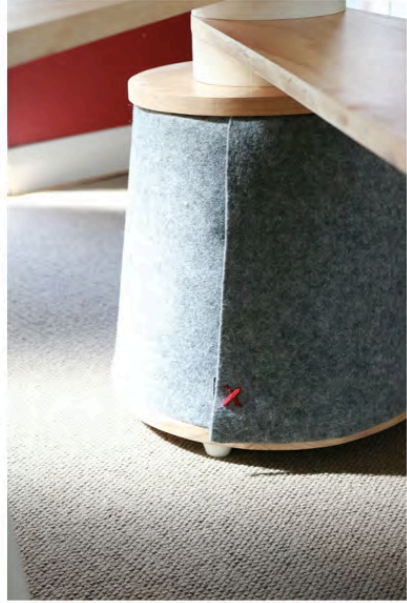
PYRAFOLIO



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FACILITATORY DESIGN FOR STUDENTS IN DORMITORY LIVING.

Rhys Tofferi

This product provides an interactive and engaging furniture option for students in high density living scenarios. The design supports personal, social, academic and spatial requirements, all whilst maintaining a subtle and clean aesthetic that integrates well into existing spaces.

Students are able to rotate this furniture piece into various positions and arrangements to meet the ever-changing requirements of their rooms.

Whether that be for a bookshelf, to display plants and pictures, or to leave empty cups and mugs, this product is shaped by the user.

Including sound activated lighting for switching on/off from a distance (e.g. from within bed, and for ambient lighting)

Interposed sections of pine create distinction between interactive parts, whilst cylindrical 3d printed components provide a strong, low friction coefficient for the rotation of the furniture.

REBOX

Oliver Williams



ReBox is a replacement for the throwaway packaging used in home delivered meal kits. Owned and operated by the companies themselves to reduce the amount of waste they produce with millions of cardboard boxes, Styrofoam boxes, plastic insulation pouches and ice packs discarded every week.

Meal kits are environmentally friendly, due to the reduction in food waste they cause, but are held back by the excessive disposable packaging they rely upon. Removing this latter issue allows meal kits to provide an environmentally friendly food solution, as well as a convenient one. ReBox is a storage solution for groceries

in transit that allows the industry to transition to a circular economy system, utilising the company's pre-existing infrastructure, delivering a box of groceries and at the same time collecting last weeks now empty box and taking it back to the company to be cleaned and re-packed. This system not only reduces the environmental impact of meal kits but also increases the convenience for customers as they are no longer stuck with the waste and the chore of its disposal.



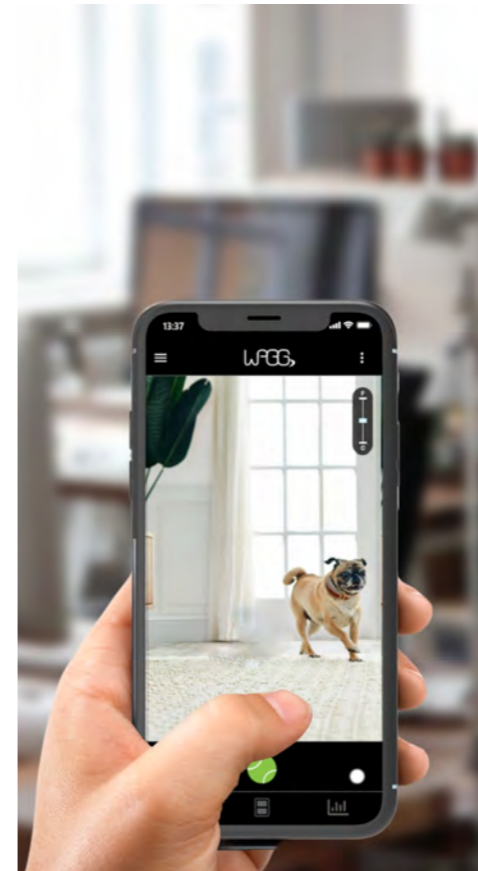
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High-density living is slowly becoming the norm. As such, increasing the demographic of dog owners living in smaller apartments lead to owners spending more time in close proximity with their dog. Through the research done during the capstone report, it was understood that there is a strong correlation between separation anxiety in dogs and the dog's frequency and proximity of contact with their owner. The effect of separation anxiety often leads to the destruction of items and noise complaints from neighbours, resulting in possible emotional and financial distress and decay of the relationship between the owner and dog.

Wagg an automatic ball dispenser aims to reduce the negative effects of leaving a dog alone by creating a repetitive form of entertainment for the pets. This allows the pet to receive a higher sense of enjoyment without the reliance of an owner. This product can heavily impact a dog's fulfilment in life even in the absence of the owner. Furthermore, the device is also designed with the function to be remotely activated from long distances via a specialized app, creating an opportunity for owners to be able to monitor, call out and play with their pets even when away from home mitigating separation anxiety.



HONOURS CAPSTONE GRADUATES OF 2020



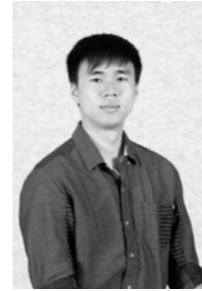
Gonz Portas
Course Coordinator



Cameron Brown



Chon Hou Chan



**Zeng Wei Felix
Koay**



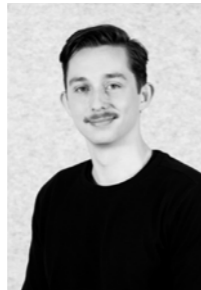
Genevieve Lam



Yolanda Law



Caitlin Duffus



Noah Elmes



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Jiayi Li



Jesslyn Liu



**Nicholas
Matkovic**



Julia Ho



Claudia Jaqin



Jesslyn Johanna



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Wei Pan



Lily Peel



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James Savva



Natalie Taliana



Hei Ping Tam



Jeremy Tan



Rhys Tofferi



Oliver Williams



Hei Yeung

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