

## SCHOOL OF PRODUCT DESIGN

CLASS OF 2024 GRADUATING PROJECTS



#### **UNIVERSITY OF CANTERBURY**

## SCHOOL OF **PRODUCT** DESIGN

The School of Product Design at the University of Canterbury was founded in 2018 to meet the industry's growing demand for creative and technically literate graduates. A Bachelor of Product Design at the University of Canterbury combines design and engineering to produce skilled and creative designers who understand aesthetics and technology. There is also a business focus in this degree that helps cultivate an understanding of how to create and innovate, and effectively take things to the market. With an emphasis on end-user, sustainability, and ethical design, the University of Canterbury is leading the way with its multidisciplinary Bachelor of Product Design. We offer Bachelor's Degree majors in four areas: Industrial Product Design, Game Design, Chemical Formulation Design, and Digital Product Design. We also offer a Bachelor of Digital Screen with Honours, as well as a Masters' Degree in Product Design and Product Innovation.



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# APPLIED IMMERSIVE GAME DESIGN



## APPLIED IMMERSIVE GAME DESIGN

Applied Immersive Game Design covers virtual and augmented reality, where the software and hardware are beginning to massive growth. The development of games for entertainment and applied games (for training, education, and the carrying out of remote activities) are included in this major. Facilities for Game Design students include computer labs with some of the most powerful computers on campus and a virtual reality lab with leading-edge technology, motion capture and gaming consoles (strictly for educational purposes, of course!). Students use this latter space for VR experience testing and game evaluation, studying existing game design, and user testing of student-created games and applications.







#### **JAMES ANDERSON**

#### **Tiny Politik**

TinyPolitik is a 4x grand strategy game which features casual long term gameplay, friends build diplomatic relations, assemble armies and construct economies through trade.

My role in this project was as the 3D artist, working with the other members to develop an interesting aesthetic and retro art style that would remain consistent through each medium. My individual work consisted of the creation of the games 3D assets, modeling through hard surface and procedural workflows.

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#### **OLIVER COATES**

#### **TinyPolitik**

TinyPolitik is a turn-based social-casual grand-strategy game. It takes elements from 4X games like Civilisation or Hearts of Iron and distills them into a casual/social experience. Players can create a nation, expand, trade, develop industry and fight others. Every day, a small number of turns are scheduled to occur. Players have to log on for only a couple of minutes, a few times per day. Games therefore will take weeks, giving plenty of time for diplomacy, deception, and intrigue.

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#### **HARRISON COLLETT**

#### **Another Visitor**

Another Visitor is an immersive VR game that combines liveaction and virtual settings, where players work in asymmetrical roles to complete a challenging space rescue mission. Explorers navigate the virtual world in VR while Mission Control guides the player from the computer's desktop, close collaboration and strategic teamwork are required to succeed. My role in the project was designing and programming puzzles, creating assets, and aesthetics for the puzzles I designed and programmed.





#### **KELSO DU MEZ**

#### **TinyPolitik**

TinyPolitik is a casual, multiplayer 4x grand strategy game in which friends build their empires whilst conducting trade, diplomacy, and waging war. Our goal was to create a prototype of this concept in order to prove its efficacy, but we weren't prepared for how addictive our game became.

My role in TinyPolitik was in frontend development and testing. I conducted extensive paper prototyping, and worked closely with our artists in development of the game's art and UI.

⋈ kelsodumez@gmail.com

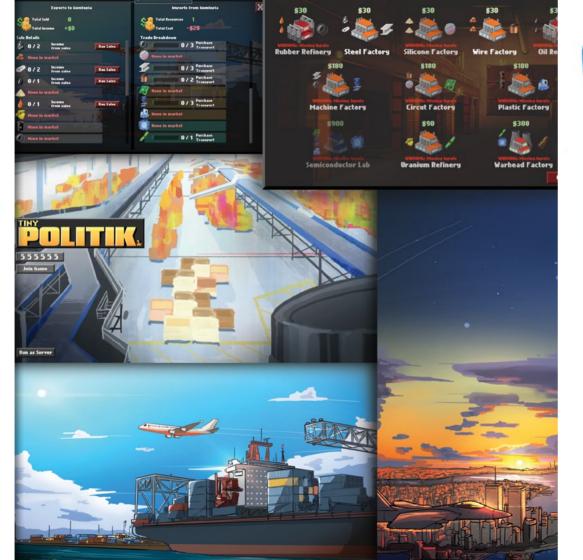


#### **KEVIN KANG**

#### **Tiny Politik**

Tiny Politik is a multiplayer, 4X strategy game where players are to grow their nation through building factories, trading and forming an alliance with other countries. I was in charge of the game's 2D background and UI illustrations which are inspired by the aesthetics of the early 2000's computer graphics.

★ kevin.kang0604@gmail.com







#### **MOYANG LI**

### Bladeless Sword: Tale of Qin

A 2D Metroidvania game with ancient Chinese fantasy theme, have a great adventure with Qin and her mysterious bladeless sword. Parry-focused game experience and challenging Boss combats let you have a dream with sword and Kung Fu. Get into the game world, experience the epic story, and have your own ancient Chinese fantasy journey!

□ li\_moyang@hotmail.com



#### **SIMON LI**

### Bladeless Sword Tale of Qin

Bladeless Sword Tale of Qin is a metrodvania 2D platfomer combat focused game, you will play as Qin to experience her stories with the mysterious sword hilt, however, it can burst air to form a blade shape... Qin accidently encountered this hilt, but also get posioned seriously, she have to find a way to heal herself in 3 years...

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#### JHIRO MOLINA

#### **Another Visitor**

In Another Visitor, two players must collaborate to solve puzzles on a mysterious asteroid. This is an asymmetrical experience where one player is in VR as the Explorer and is aided by the Mission Control player using the desktop. My role in the project was on the technical side of getting Unity to run the two different experiences at once. I also made sure to design the systems in a way to allow us to effectively playtest the gameplay.

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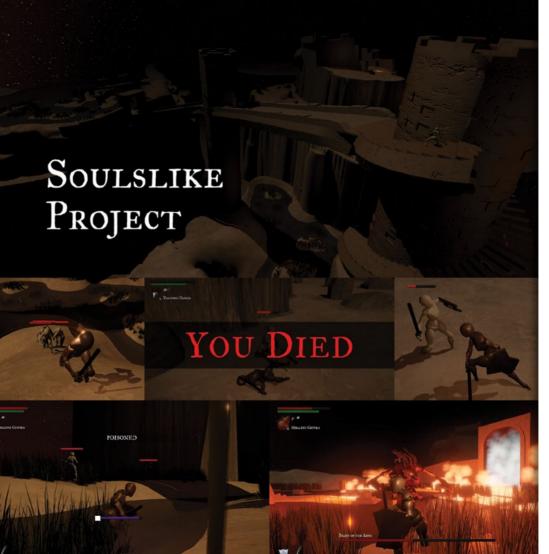


#### **LUKAS QI**

### Bladeless Sword: tale of Qin

This game is an action game featuring Chinese-themed visuals and music. Unlike other action games on the market, our game focuses more on parrying enemy attacks to deal damage. Players can explore the map to unlock different skills and use these skills strategically in various boss fights to progress.







#### **KRIS SIAN**

#### Soulslike Project

Soulslike Project was a selfdirected solo 'deep-dive' into Animation and Al Behaviour Programming by way of recreating the gameplay of third-person action RPG Dark Souls.

Over fifteen weeks, I learned to implement animation layers and blend trees, utilising root motion and inverse kinematics to create a complex character controller; physics layers and accurate hurtboxes for combat; goal-oriented action planning for enemy character behaviour; modelling, rigging, and animating a Boss creature; and working with a larger-scale codebase for the first time.

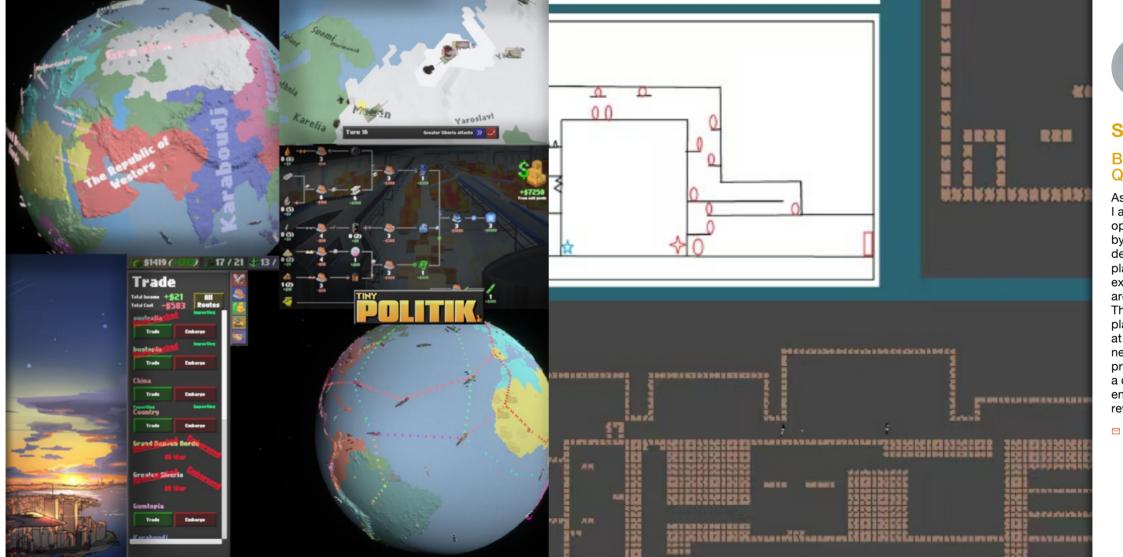


#### **FINN WESCOMBE**

#### **TinyPolitik**

A game of world war, deep economies, simple fun and roleplay, TinyPolitik is a multiplayer turn-based game offering 4X grand strategy to a group of friends in a casual, accessible way.

As a programmer and designer, I collaborated with my team of 5 in creating a prototype which we tested and enjoyed alongside 20 players online. Among other things, I worked on the camera controls, cinematic replay of a turn's relevant events, trade, and diplomacy.





#### **SHENGQIN XU**

### Bladeless Sword:tale of Qin

As the level designer for our team. I am responsible for creating an open-world environment inspired by the Metroidvania genre. Our design focuses on providing players with a vast world to explore, filled with interconnected areas, secrets, and challenges. The open-world structure allows players the freedom to explore at their own pace, discovering new abilities and paths as they progress. Our goal is to deliver a captivating experience that encourages exploration and rewards curiosity.



#### **AKMAL ZAHARI**

#### **Another Visitor**

Another Visitor is an asymmetric VR game where two players, one as the VR Space Explorer and the other as Mission Control on a PC, collaborate to solve puzzles and uncover mysteries on an isolated asteroid. Through immersive exploration, communication, and strategic problem-solving, players must manage resources and make real-time decisions to survive. This experience emphasizes teamwork and dynamic role differentiation, offering an innovative twist on traditional escape-room mechanics.

My Roles in the project were Producer and Designer. Managing the project and designing the puzzles.

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# CHEMICAL FORMULATION DESIGN



## CHEMICAL FORMULATION DESIGN

This stream looks at designing products from weedkillers to lipstick, healthcare and cosmetics. Formulation designers are needed in the innovator and generic pharmaceutical industries and for all sorts of chemical products, including cosmetics, fragrances, paints, foods, adhesives, and many household products. The Formulation Laboratories are where students create a range of formulations and conduct their research. The formulation labs include formulation science, a fully-equipped fragrance design lab and, from 2021, a new research lab and a food-grade formulation lab. Equipped with sophisticated scientific instruments such as a gas chromatograph-mass spectrometer, freeze dryers, blending and tabletting machines, and equipment for extracting active ingredients from plants. Students attend formal formulation science labs and have flexible access during their main design projects to create their various lotions and potions.









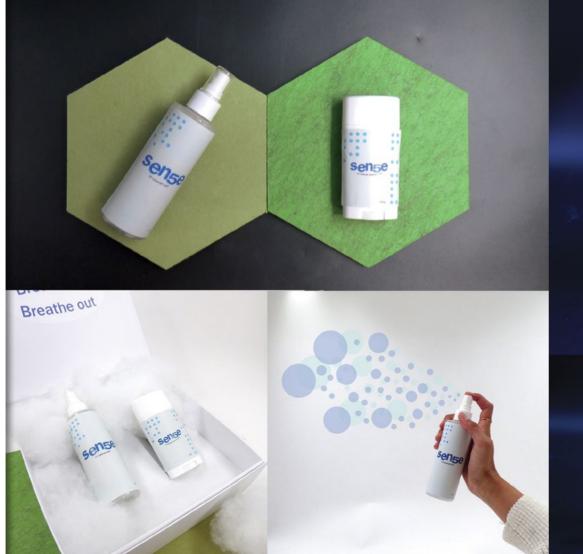
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#### **SARAH CLARKE**

#### Sen5e

Young Kiwis aged 18-24 are experiencing rising anxiety and stress, with limited access to mental health support due to overwhelmed services. Sen5e addresses this need with the Sen5e of Comfort Mist and Sen5e of Comfort Massage Stick. These engage the five senses, blending calming scents and practical tools to build resilience and confidence while grounding the user. Marketed as cosmetics, Sen5e products provide accessible support for stress relief, offering essential strategies for young people facing anxiety challenges.







#### LIAM MICHAEL HEARN COOK

#### **Dimension**

Dimension is a multi-sensory sleep aid experience designed to help individuals with sleep disorders achieve better rest. By subtly stimulating the olfactory, auditory, and tactile senses, it creates an optimal environment for relaxation and sleep. Experience a new way to unwind and improve your nightly rest with Dimension. Its time to step through.



#### **KYRA ELLIOTT**

#### **D SUPER**

Aotearoa's food system is burdened with food scarcity, nutrient deficiency, agricultural pollution, and food waste, which is further exacerbated by our cost-of-living crisis. D SUPER dares to solve this by harnessing a new, innovative superfood: Hermetia illucens larvae. This super-ingredient allows us to offer sustainable, affordable, and incredibly nutritious food solutions to Kiwis. Afghan Active, HYSO protein powder, and Mynce are easily integrated into your lifestyle so that you can supercharge your health, save your wallet, and save the planet.

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#### SABINE FARRAR

#### **Agspot**

Agspot offers a solution for farmers and agricultural workers seeking safer, more effective weed management with its two-product line: Safemark Red Marker Dye Solution and Safefade Surface Stain Remover. Safemark fills a critical gap in the industry, balancing safety with functionality. Complementing this, Safefade is crafted to handle the dye residues left on agricultural equipment and surfaces. Targeted at the New Zealand agricultural sector, Agspot is poised to redefine weed marking with a solution that values safety, visibility, and simplicity.



#### **SOPHIA GROSS**

#### Re:Pause

At Re:Pause our mission is to provide natural, accessible and effective relief for menopausal symptoms. Aiming to empower women with solutions that are constructed with natural ingredients backed by herbal research to ensuring their comfort and wellbeing is maintained during this time of life

Our primary products consist of Re:Brew, a functional herbal tea that supports hormones, sleep and mood and comforts overall wellbeing, and Re:Aid a soothing spray cream which targets joint pain and muscle aches a common symptom of menopause.

Both of our original products focus on relief through natural ingredients that are scientifically formulated to be gentle while delivering strong results.





#### **ANITA KAO**

## Embolden hard water scalp care kit

This is a collection of scalp care products designed to address problems caused by hard water. It includes scalp cleansing tablets that remove harmful minerals and a soothing serum that calms and fixes other issues. Together, these products provide complete care for your scalp, aligning with our brand's commitment to look after your hair and grow your confidence.

□ 0301anita@gmail.com



#### **SUKHLEEN KAUR**

#### Buggy

Buggy is an insect-powered dog food range. By harnessing the power of insects - which require significantly less water, feed, and energy than livestock - Buggy helps pet owners reduce their carbon footprint without sacrificing quality. Unlike standard dog foods that rely on low-quality meat-meal, Buggy is crafted with high-quality ingredients that address common allergies and keep dogs fuller for longer. With Buggy, you can feel good knowing your best friend is receiving top-tier nutrition while contributing to a more sustainable planet.







#### **RORY LYNCH**

## Crybaby Self-Care Solutions

Crybaby offers a line of selfcare tools designed to promote relaxation, enabling users to create moments of calm and manage anxiety. The first product is the Crybaby Night Massage Bar, a solid oil-based formulation to be massaged into warm skin, releasing a soothing dose of melatonin and magnesium to promote sleep. The second product, the Crybaby Calming Mist Toner, is a portable stress management spray, helping users find calm with its relaxing fragrance and blend of hydrating and soothing ingredients.

☐ rorylynch03@gmail.com



#### **ALLIE NELSON**

#### Kairos

Kairos provides an innovative avenue for fragrance customization. We aim to enhance the consumer experience through prioritizing self-expression/ care, celebrating creativity, and encouraging informed decision-making. Our consumers will be in control of their scent via a triple-chamber component designed for scent modification, selective fragrance bases (water/alcohol), and a practical scent discovery set.

The beauty of self-expression and the rightness of time and place, the meaning of Kairos, is to be reflected through scent, encouraging the wearer to embrace their individuality.

□ allierose.nz@icloud.com









#### **SOPHIE RENTON**

#### **Good Treats**

Good Treat's product line is intended to improve the consumer's well-being by providing micronutrients that are depleted when using hormonal contraception and, therefore, easing side effects that may be caused by these nutritional deficiencies. The product line includes two supplemented food products, a Raspberry Chocolate Brownie and a Frozen Kefir 'ice cream' that is vanilla flavoured with a date caramel swirl. These products have been chosen as they are popular foods that women crave when hormone levels are high.

GOOD TREA

FROZEN KEFIR

GOOD TREATS



#### **DAEEM SHARIFF**

#### Inkaeien

Inkaeien helps tattoo artists create a masterpiece from every drop, meeting the strictest safety and regulatory standards while addressing the needs of both professional artists and their clients. We make tattoo artistry more accessible with a locally made product line, featuring a range of tattoo inks in various shades and a comprehensive aftercare range, including a priming antibacterial wash and a restoring cream, both formulated to enhance healing and protect the tattoo's integrity.

☑ daeem.shariff@gmail.com





#### **EMILY TOBBELL**

#### Kenkō

Kenkō is a premium lifestyle brand for ostomates, transforming a medical necessity into a moment of self-care. Beyond the physical and mental adjustments to life with an ostomy, ostomates face the significant hurdle of odour, creating feelings of shame and embarrassment. Our product line features lubricating odourneutralising drops, gelling odourcontrol sachets, and a fragranced spray-and-wipe mist, addressing different needs in various situations. With our effective. accessible and dignified products, we offer long-lasting freshness, allowing ostomates to embrace life without limitations.

35

kenkō mist

your ostorny care solution

eday corpy solution from rather

150 mt / 5.05 ff or

kenkō absorb

your ostomy care solution



#### **YUHAN ZHAO**

#### **HerbaPaws**

We believe that pets deserve the same care and attention we do.

We are committed to providing natural, gentle, convenient, effective cleansing and aftercare products for our dog by combining the power of herbs with modern science to help prevent and relieve common dog skin problems while embracing sustainability to protect our planet, and providing a better healthy future for pets and their owners.





## INDUSTRIAL PRODUCT DESIGN

## INDUSTRIAL **PRODUCT** DESIGN

Every product we buy has a combination of elements in both design and usability. This major teaches how to design products that solve a problem and create the desire in consumers, using hand sketching and ideation methods, computer-aided design (CAD), and physical prototyping. Our Makerspaces are where students develop, design and produce handcrafted models as well as assemble and as well as finishing high-quality prototypes. Available equipment covers an enormous range of modern maker needs, including 3D printers, laser cutters, vacuum formers, hand mills, numerous workshop machines, electronics, a CNC router and other equipment to turn digital designs into physical concept models. Materials used by the students include foam, cardboard, wood, plastic, steel, resins, textiles, glass and more, depending on what they have designed and the intended functionality.









#### **FINN ANDREW**

#### **Garnet Recycling System**

This project is based on sorting and reusing the abrasive from a water jet cutter. Garnet is often used once and then thrown out as sorting through the garnet is usually very expensive to sort and buying more, new garnet, is much cheaper. However the left over garnet is still viable to use for cutting or other purposes. This product uses electromagnets to sort between the garnet, metal fragments, and non-magnetic debris. This is possible as garnet magnetically attracted.

☐ finn.andrew20@gmail.com







#### LIVIA ANGELINA

#### **Glass Dismissed**

Glass Dismissed is the idea of replacing traditional glass wine bottles with aluminium foil pouches. A single pouch is equivalent to a single restaurant wine serving which makes it a convenient and easy alternative for people who would like to enjoy wine without opening a large bottle. The aim of this project is to help design a packaging that will help integrate this product into the market.

☑ livia.angelina918@gmail.com



#### **COLE BLACKWELL**

#### AirAlign

Precise patient positioning is key for success in the operating theatre to reduce the risk of postoperative incidents. Pre-existing manual repositioning methods pose risks among the likes of pressure ulcers, musculoskeletal strain on surgeons and nursing staff (Dauber and Roth, 2009), and prolonged procedure times (Asiedu et al., 2018). Improving this process will directly increase the amount of positive patient outcomes and operational efficiency.

□ colepblackwell@gmail.com

### IMAGE WITHHELD FOR INTELLECTUAL PROPERTY REASONS





#### LIAM BOYD

#### **Our Mosaic Journey**

"Our Mosaic Journey" is an experience design, created to help socially anxious adolescents build self-esteem through guided activities. Implemented in primary schools, the concept encourages students to participate in weekly activities drawn from a communal journey map, led by the class teacher. Each activity card focuses on building identity, confidence, and social belonging. After completing each task, students reflect individually, integrating cognitive-behavioral techniques validated by psychology experts, to promote personal growth and emotional resilience.

☐ liamjboyd11@gmail.com



#### **KADEN BROCK**

#### OceanWrap

OceanWrap is a fishing rig wrap redesigned to maximize durability and usability. The design has a solid nylon composition and range of holes to fit any size or length fishing rig. The design is made to be injection molded out of a material designed alongside the project called NZylon, made from 100% decommissioned fishing waste. The design is intended to promote circular economies in New Zealand's fishing industry and demonstrate to other manufacturers the opportunity and possibilities with recycled nylon.

M kadenbrock@outlook.co.nz









Thermoformed Breast Supporter



11kg on top of the exiting product



54x80x104cm



Can withstand over 300kg



Optional pelvic support and comfort





#### **HATAIPAT CHOMCHOEI**

#### **Ergonomic Platform for** Medical's Breast Cancer **Screening System**

This project develops an ergonomic, portable platform that enhances comfort for patients undergoing breast cancer screening. Designed to support Tiro Medical's compression-free imaging technology, the platform aims to make screening more accessible and comfortable, particularly for under-screened groups such as vounger women and those in rural areas. Emphasising user comfort and portability, the platform was developed through iterative design and user feedback, resulting in a user-centered solution that complements Tiro Medical's advancements in early detection.

well.chomchoei@gmail.com



#### **RUBY COWAN**

#### VersaTech

A modular smart wearable with many shapes and form factors. Each module can be swapped out with ease via a connector screw. This crew also allows for users to pick their own form factor, whether that is a watch strap, a necklace, or a chest strap. It provides opportunities for small businesses to create forms, and maximises user experience through customisation.

☐ rnlcowan.uni@gmail.com









#### **GRIFFIN DE BOO**

#### BARCYCLE

Barcycle is a self-care storage container constructed from high quality and long-lasting materials. Barcycle puts the life of the bars first. Each bar is centrally suspended in the container by a magnetic connection enabling the bar to drain and dry out irrespective of the products orientation. Barcycle is ideal for travel with easy in-shower access through a suction cup on the reverse of each container. The modular nature of the design means colour customization and flexibility for travel.

☐ finndeboo@gmail.com



#### **ZHUOHENG DENG**

#### **Easy Pour Kettle**

The aim of the project was to solve the difficulty elderly users and individuals with reduced hand strength face in lifting and holding a kettle. This was achieved by incorporating features such as a rotating pouring mechanism and an ergonomic two-handed handle to enhance ease of use and safety. Additionally, the design embraces a traditional and classic appearance, avoiding medical or nursing design elements to reduce potential resistance from the target audience.

☑ zh.deng16@gmail.com





#### **SAM DIXON**

#### Sweezle

Enabling artists to paint, draw and sculpt in ways that have previously been limited by traditional easels, the Sweezle has a functionality unlike anything else on the market.

Smooth and enjoyable to use, the rotation of the drawing surface allows artists to turn it to suit the natural arc of their wrist. This motion also opens the door for kinds of marks and art-styles that have previously been impossible in traditional art.



#### **MICA DOCE**

## Optimising Home Organisation

This project explores innovative solutions to improve home organization among university students in shared flats. emphasizing collective cleaning habits. Through empathy-driven research via the EDIPT framework. it addresses challenges like limited space, motivation, and varied cleanliness standards. The solution, "Finish in Five," consists of physical cards that encourage group cleaning and shared responsibility in communal areas such as kitchens, lounges, and bathrooms, helping students keep a tidy, organized living space while building practical skills for maintaining shared environments.





#### **SOPHIE ELLETT**

#### Flume.

Flume is modular outdoor furniture engineered to meet the demands of diverse environments, mainly focusing on water management. Its distinctive four-cushion layout and angled surfaces enable effective water runoff, preventing pooling and soaking. This design ensures water flows naturally to the edges. reducing moisture build-up on or beneath the cushions. Cushions are easily removable for storage, enhancing versatility and ease of use. The design enhances the furniture's usability and longevity, making Flume an adaptable, resilient choice for outdoor settings.



#### **BRIAR ELLYETT**

#### FloVo

FloVo is an innovative exercise companion designed to assist individuals who experience dyspnoea (shortness of breath). FloVo provides real-time monitoring of Expiratory Flow Limitation (EFL) during physical activities, offering valuable insights and visual feedback to enhance exercise performance and manage breathing more effectively.

☑ briarellyett@gmail.com







#### **CLARK FOUNTAIN**

#### **Natural Fiber Composites**

Established in 2020. KiwiFibre seeks to tackle the environmental challenges of the composites industry by using Harakeke (Phormium Tenax). Given its recent development, limited information is available on Harakeke's performance in composite applications. This project set out to "develop a product to inform and educate users about the properties and processes of KiwiFibre in comparison to traditional composites (carbon and glass fiber)." A Level 2 High-Powered Rocket was selected as an eye-catching, high-performance application to showcase the material's potential.

☐ clarkfountain36@gmail.com



#### **CAROLINE HALEY**

#### Helio Bands

Skin cancer is a growing concern in New Zealand, especially for outdoor enthusiasts. Helio Bands are UV-reactive wristbands designed to keep water sports and activity enthusiasts safe while having fun.

When sunscreen is applied, the band remains white, indicating that the user has enough sunscreen coverage to be shielded from UV. As sunscreen wears off, the colour deepens, serving as a reminder to reapply and stay protected.

□ caroline@haley.co.nz





#### MARCUS HALL-TAYLOR

## KLOSA STEP 1 - A Casual Basketball Shoe Design

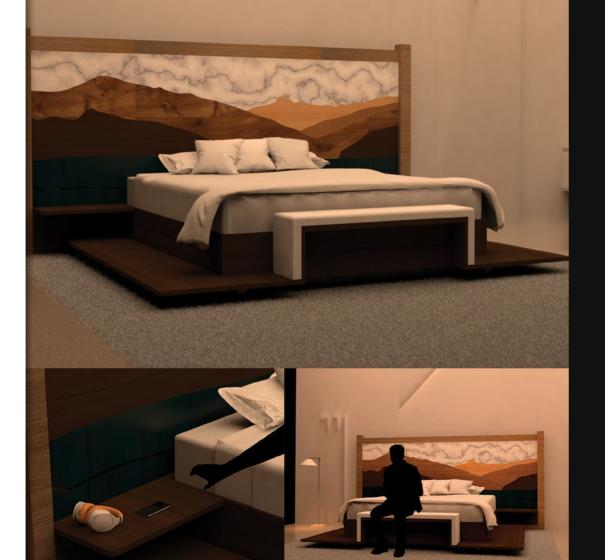
Many basketball players in New Zealand avoid buying basketball shoes because they mostly play outdoors, and typical shoes are expensive and not durable enough for concrete. The KLOSA STEP 1 addresses this by offering a design built for lasting outdoor use while also featuring a minimalist, casual look that appeals for social use. This dual-purpose design allows those who play basketball less often to still get quality use out of it no matter what.



#### **DYLAN HASLER**

## Porada Design Competition

My project was based on the 2024 Porada design competition brief. The basis of this competition is to design an innovative bed that conveys the values of the Porada brand. My design "Como" is inspired by the landscape of Lake Como, where Porada is located, featuring a stunning headboard with fluid lines that represent the location, also featuring a connected ottoman, bedside tables, and a step that makes Como highly functional and accessible.







#### **KAPIL KUMAR**

### Flammable Drawer Cabinet

This project aims to create a safer storage system for use in small laboratories, such as in universities or small business, by using a drawer system. The drawer eliminates the need to crouch down and rummage through the cabinet to reach the back Items, which is one of the leading causes of chemical spills in laboratories. Users also have less exposure to fumes over time, as fumes are contained in the drawer and not released as the doors open.

☑ kkapil3167@gmail.com



#### **JENNA LAWSON**

#### Early Insight - Next Generation Breast Cancer Screening

Early Insight improves Trio Medical's breast cancer screening device, enhancing portability, ergonomics, and accessibility, particularly for young women and those in rural areas. The design incorporates Māori cultural perspectives to align with the values and needs of Māori women, ensuring the device is both functional and culturally sensitive. This project aims to provide an innovative, accessible screening solution that supports women's health in underserved communities.

jenna.lawson@xtra.co.nz





#### NATHANIEL LEAVY

#### Cyathea

Cyathea is a bio-inspired system that incorporates vertical planting, composting and rainwater collection into one structure. Intended for use in suburban home gardens or urban community gardens, Cyathea aims to increase the space-efficiency of a vegetable garden while also providing enhanced nutritional access to the plants and a convenient gardening experience.

Cyathea is designed to provide accessible food security to anyone; it can be sold as an affordable kit or DIYed from scratch from parts available at a hardware store.

□ nateleavy@icloud.com



#### **HUIWEN LIANG**

#### Wine Packaging Design

The pouch is a wine package made of soft plastic that is unbreakable, lightweight and flexible. Our target market is the younger generation of wine drinkers. The background design incorporates many Y2K elements, and the overall design uses a lot of bright colors, which also expresses the Gen Z community's pursuit of freedom, vitality, and uniqueness. I hope the wine pouch gives users different usage scenarios, such as home, party, and outdoor.

□ lianghuiwen0708@gmail.com





#### NICHOLAS MCINTOSH

#### **Glass Half Full**

The primary issue regarding potential cargo e-bike adoption at UC is not the bikes themselves. but the items carried and the way they are carried. Currently, the majority of accessories for cargo e-bikes are too similar, lack sufficient cargo protection, and are too often designed for a single bike or single brand of bike, with third party accessories requiring adaptors, numerous quick-release systems, or tools. Glass Half Full solves this by providing a variable volume solution with movable attach points.

□ nicholas.mcintosh101@gmail.com

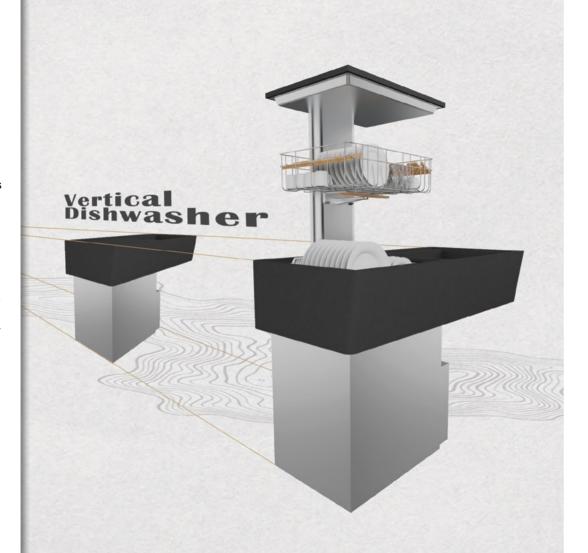


#### **JOHN MCLEAN**

#### **Vertical Dishwasher**

This vertical dishwasher reimagines the common kitchen appliance creating a more stylish and functional device. The top-loaded raising rack design solves the ergonomic issues on the market reducing the friction of loading dishes due to the user not needing to bend over constantly. It achieves this while still having sufficient place settings for the users' dishes.

johnmclean707@outlook.com











#### **DANIEL METHERELL**

#### The Kiwi Guard Pro

The Kiwi Guard Pro successfully combines aesthetic minimalism with high-performance materials. The guard's grey colour scheme and ergonomic shape offer a sophisticated look, while the sandwich-structured composite ensures high levels of protection and comfort. The combination of Polypropylene Plastic, EVA Foam and Kiwi Fibres (Harakeke Flax) provides an effective use of impact absorption tailored to athletic performance. The guard's lightweight durability, personalised fit and superior level of protection will make it a standout shinguard in today's market.

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#### **THOMAS MILLIS**

#### WardMate

Nurses face a myriad of problems stemming from poor storage. From stabbing themselves with scissors to embedding glass in their hands, poor storage and lacking the right tools cause serious issues in NZ hospitals. The WardMate is a multitool which solves this issue by compiling and upgrading the standard nursing toolkit, making it easy to store and manage.

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## ModuMate











#### **ADAM MORGANTY**

#### ModuMate

ModuMate is a modular, spacesaving furniture solution designed for children's rooms. It combines seating, storage, and play in a flexible system that encourages abstract play and creativity, free from screens and devices. With ergonomic components and a compact design, ModuMate adapts to different activities, allowing kids to rearrange and personalize their space. Its versatility fosters imagination and physical engagement, providing a playful and practical alternative to passive entertainment, while maximizing room functionality.

☑ adam.morganty@gmail.com



#### **OLIVER MORTLOCK**

#### **Bottle Dismissed**

Bottle Dismissed is a packaging project for socially responsible-sized single portions of wine. It is a foil laminate pouch filled with wine and a secure flexible card sleeve. The aim of this project is to reverse the trend of decreasing wine sales compared to other alcholic beverages among young adults. Bottle Dismissed achieves this by providing an accessible way to explore varieties of wine through being more convenient and cheaper than glass bottles currently on the market.

☑ olly.mortlock123@gmail.com





#### **ABIGAIL MURPHY**

#### The Flatpack Couch

The Flatpack Couch is the solution to a lack of purpose-built and affordable seating options for student flats. This design can be effortlessly assembled and disassembled as the frame slots together without any fixings. Efficient manufacturing methods and cost-effect materials ensure this product doesn't break the bank but is still durable and stylish. All materials used are either recyclable or biodegradable. It offers flexibility as the cushions and armrests can be rearranged to fit any desired position.

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### **CALEB PALMER**

### Nodi Modular Lamp

The Nodi modular lamp range offers a fully customisable lighting experience with magnetic orbs that can be easily swapped to change the aesthetic or mood of any space. This interactive system provides a striking centrepiece while allowing personal curation. Components are available individually or in bundles, with premium orbs and more affordable housings. This tiered pricing lets customers invest in a high-quality orb and refresh their lamp's look by adding accessible housings over time.

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### **REUBEN PRICE**

### KeyGlide

KeyGlide is a mechanical capo clamp that helps players reposition a capo and change keys quickly mid performance. This could change the way guitar is played and what is possible to play, helping to avoid impossible stretches to reach notes.

The product moves smoothly and is easy to operate with some practice. Allowing players to comfortably change capo positions in a third of the time it takes to move a traditional capo.

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### HANNAH REMPALA

# Take Me to Jesus - Bible Kids Toy

Inspired by the lack of good biblical Christian toys, 'Take Me to Jesus' was created. This toy focuses firstly on being a collection that fosters fun and creativity for the child through the different elements (Chariot, Characters and many accessories). Secondly It is also made to be a teaching tool for parents, with the Chariot who takes Old Testament Characters (Esther & Moses) through their stories, picking up accessories along the way!





### **ALEXANDRA RICHARDSON**

# Lucozade Next Generation Packaging

Lucozade has challenged designers to design the next generation of packaging for their Sports drinks. Directedly targeting the Plastic pollution problem. This has been done by Developing a reusable and refillable bottle

Made from polypropylene, a material selected for its durability as it needs to withstand multiple use. Upon purchase, the bottle is sealed with a removable aluminium peel, which consumers peel away before attaching their own reusable screw-on lid. Promoting hygiene and convenience. Once the bottle is empty, the user detaches the lid, returns the bottle through drop boxes located in high traffic areas for sterilization and refilling. Resulting in a freshly sealed product back on the shelves forming a closed-loop supply chain that minimizes waste and maximizes resource efficiency.

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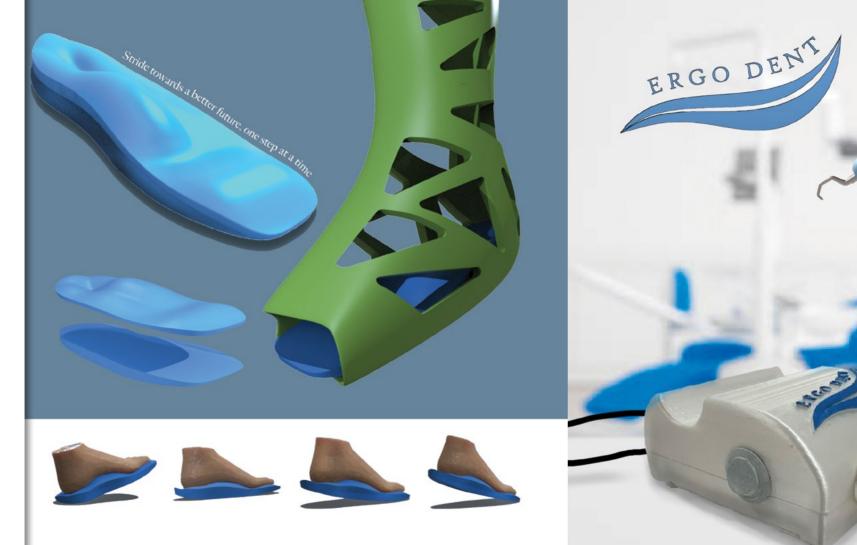


### **CATRIONA SAVAGE**

### Stride Boot

The Stride Boot is a recovery boot that focuses on being adjustable, comfortable and breathable. Initially focusing on designing the shape of the midsole, as well as, designing and testing the insole. The midsole purpose is to reduce the height of the overall sole, while providing comfort against the impact of walking with an injury. The insole purpose is to provide correct anatomical support to reduce chances of secondary injuries and improve the healing process of the primary injury.

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### **RENEE SAYAL**

### **ErgoDent**

ErgoDent is an instrument designed to help prevent/ mitigate Repeated Strain Injury (RSI) for dentists. This instrument augments the motion of the wrist for dentists by creating an in and out motion. ErgoDent is versatile, with the dentist being able to pick at the teeth as well as condense fillings. It decreases the amount of repetitive movements the dentist has to undergo whilst working, therefore decreasing RSI.

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### NIAMH (SHELBY) SELBY

### Forget-Me-Not

The Forget-Me-Not tailors itself towards the needs of people with Dementia and their carers. This design focuses on independence while tackling the issue of over and under-medicating. It achieves this through its rotating mechanical system which dispenses medication portions at set times. An app allows carers to create visual and audible alarms to grab the attention of the person with dementia. When not dispensing medicine the Forget-Me-Not displays the date, time, and weather along with an additional display screen.

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### MATTHEW SELLWOOD

## TerraSpan: Innovating Accessibility on Worksites

This project is about making accessibility on construction sites safer and easier. The TerraSpan is a stair system that adjusts to every angle of slope, and is able to be driven into the ground easily. The legs are telescopic to allow for uneven terrain. The grip tape creates a non slip surface, prefect for wet weather.



### **TOBIAS SMIT**

# LoRa Collar: GPS Pest Tracking

The LoRa collar is a custom design made to house the long-range GPS equipment used by Manaaki Whenua to track possums during their field experiments, allowing them to better understand their behavioural patterns and habits. Learnings from this project will be used to create future designs as the technology advances over time. The collar is designed so that assembly and repairs are easily done out in the forests of Aotearoa, using common materials, simple fixings and minimal tooling.





### **NINGYUAN TANG**

### Gecko Shelter

This project designs a sustainable shelter for the endangered orangespotted gecko in New Zealand, addressing challenges such as habitat loss and predation. The shelter uses eco-friendly materials and features predatorproof entrances to provide a safe, natural habitat. Its design blends seamlessly with the natural environment, ensuring both security and environmental integration. This innovative approach aims to support the longterm conservation and survival of the orange-spotted gecko in its native habitat.



### **BLAKE THEOBALD**

## Low cost desktop wind tunnel

This project explores a costeffective, elementary wind tunnel designed specifically for educational purposes. This wind tunnel is affordable, user-friendly. safe and portable, with features that demonstrate fundamental aerodynamic principles. It is constructed from durable yet inexpensive materials and has a compact design suitable for classrooms. The product is a practical learning tool that enhances STEM education by making hands-on aerodynamic experimentation accessible to more students and educators, fostering curiosity and engagement in STEM subjects across New Zealand.





### **CAMPBELL TONKIN**

### Vivo Base

The Vivo Base project aims to redesign Tiro medical's DIET breast cancer screening system to enhance portability, modularity, and patient comfort. By refining the current prototype, the new design reduces size and weight, enabling use in varied settings, from clinics to community locations. Ergonomic adjustments will improve patient comfort, supporting diverse body types. The modular design simplifies assembly and maintenance, making the system more commercially viable, while the improved aesthetics encourage regular screening and provide better overall user experience.

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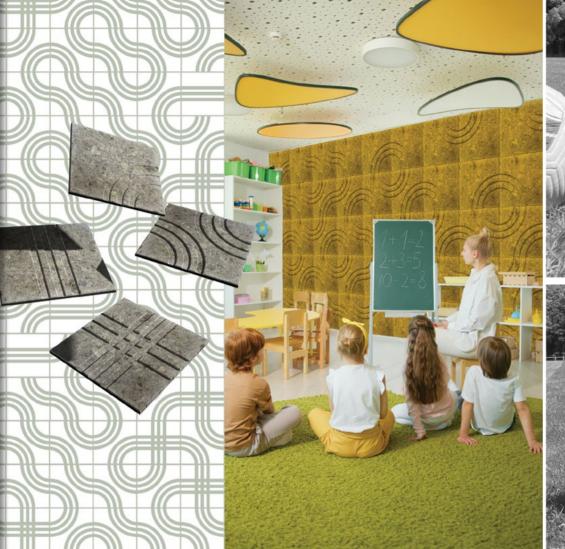


### **DUNCAN WATT**

### Wool2

Wool2 wall panels were developed around New Zealand coarse wool. This natural super-fibre is typically underused in manufacturing, with cheaper synthetic fibres being preffered.

Wool2 panels are made entirely from New Zealand materials. They offer, thermal and aoustic insulation. They are hypoallergenic, mould and fire resistant. The panels are easy to install, and can be painted to suit users needs. The four different designs allow users to create custom patterns that create the perfect aesthetic for their indoor spaces.











### KIERA WILLIAMSON

### Pitch Pack

The Pitch Pack is a multi-sport bag that allows the user to comfortably store their dirty sports gear alongside their personal items. The user can choose what compartment sizes they need to fulfill their sport's needs: each section is able to be removed, and machine washed. Adjustable straps allow for different carrying positions for ease of transportation. The bag is made from tents that were on route to landfill due to manufacturing defects, repurposing waste into the Pitch Pack.

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### **SHUO YAN**

### **OrderEase**

In the hospitality industry, many hours are spent on repetitive data entry, finding information, and handling data transfers.

OrderEase streamlines this process with its automated, intuitive system that extracts and compares order data against historical records. It aims to reduce human errors, boost operational efficiency, and alleviate employee workload.





### **JAMES YU**

### Mental Health Tabletop Game Project

The Mental Health Tabletop Game Project resulted in the creation of Bralithny, a cooperative dungeon crawler tabletop game designed to educate people on various mental health conditions through gameplay and descriptions. Players must navigate the ruins to find a specific item while maintaining their sanity, avoiding monsters and coping with mental health conditions that hamper gameplay. It has 214 cards for high replay value, and players can choose from a set of 24-character tokens to play as.

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# POSTGRADUATE

# MASTER OF PRODUCT DESIGN

The Master of Product Design (MProdDesign) takes advantage of UC's research expertise in a range of commerce, IT, and engineering fields. The programme provides a mixture of practical work and theory with original supervised research. Postgraduate studies in Product Design present students an opportunity to prepare for the ever-changing consumer market with advanced design, manufacturing, and business analysis skills. Students use dedicated facilities for creating and testing product ideas, e.g., design studios, laboratories, workshops, 3D printers, and a gaming lounge with AR and VR spaces and equipment.



# MASTER OF PRODUCT INNOVATION

The Master of Product Innovation (MProdInnovation) is opened to students of any study background. The programme offers a perfect opportunity to access specialised facilities and industry experts at university while beginning to develop their product or business ideas. Product designers have an exciting and everchanging career, needing to understand and anticipate market trends, design innovative concepts, and create interest in new products. Students get one-on-one support and guidance to help bring a project to life and ensure business success.

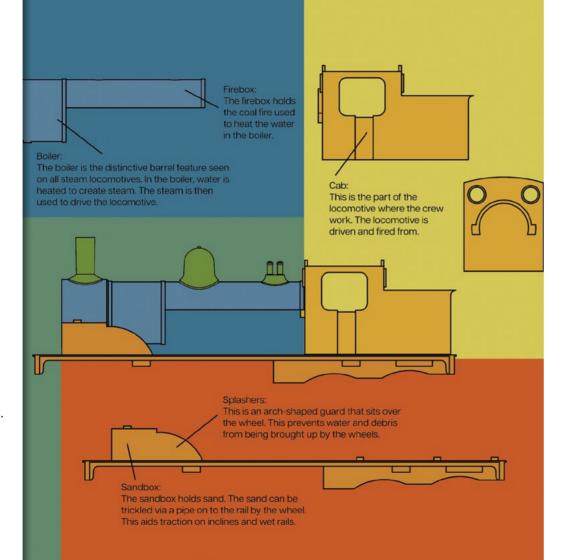


### **CELYN BENNET**

### A New Approach to Model Locomotive Kit set Instructional Design

Instructional design has traditionally posed challenges for beginners trying to enter the model locomotive construction hobby. Commercially available kits often fail to address the difficulties newcomers face in understanding the assembly instructions. This research examined these challenges by working with participants from various skill backgrounds during observational sessions. By integrating instructional and design principles through prototyping, both the instructions and the kit set components were enhanced. The outcome of this redesigned system shows the potential to make model locomotive construction more accessible to newcomers.

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### **BEN GEORGE**

### REDESIGNING REGULAR TOOTHBRUSHES FOR SUSTAINABILITY AND HYGIENE

The modular toothbrush for Toothcrush focuses on redesigning conventional toothbrushes to enhance sustainability, hygiene, and user comfort. The innovative design incorporates a modular replaceable brush head system, a biodegradable bamboo handle, and adobe brick weights for stability and cleanliness. Using a user-centered design process, the project addresses common deficiencies in current toothbrushes, such as contamination risks and environmental impact. The final product integrates ergonomic improvements, sustainable materials, and an intuitive locking mechanism, offering a superior alternative to traditional and electric toothbrushes.

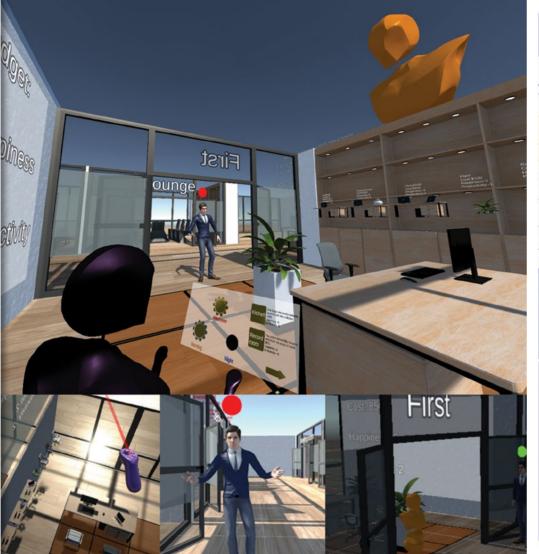


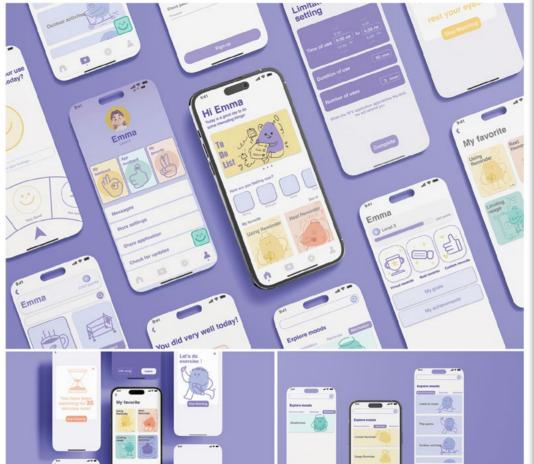
### **JERRY HAN**

# Triadic Human-Agent Dynamics in Collaborative Decision-Making within Extended Reality

This study explores how Large Language Model (LLM)-driven **Embodied Virtual Agents (EVAs)** in Extended Reality (XR) impact teamwork. EVAs were included to encourage diverse thinking, resolve conflicts, and support tasks. Results show they influence collaboration dynamics but don't necessarily improve task performance. User perspective also affected interaction, with the regular view leading to more engagement. These findings highlight the challenge of designing effective EVAs for collaboration, considering factors like embodiment, user preferences, and interaction patterns in teamwork.

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well done!



### **HONGYAO LI**

### A Mobile Application for Managing Excessive SFV Platform Usage Among Young Adults

The APP is designed to assist young adults in managing excessive use of SFV platforms. It incorporates personalized insights, reward mechanisms, feedback systems, and emotional support features to foster healthier digital habits. By employing emotional design strategies, the APP aims to mitigate unhealthy SFV usage, thereby enhancing users' wellbeing and digital consumption behaviors.



### **COURTNEY NEWELL**

### Utilising Black Soldier Fly Fat as a Sustainable Ingredient in Personal Care Products

Worldwide food waste is a large problem causing environmental, economic and social issues. Black soldier flies are clean, amazing insects with an ability to efficiently reduce organic waste and convert it into valuable components such as fat. The fat's composition is similar to coconut oil making it an ideal ingredient for personal care products like cleansers where it can help with skin conditions. This project investigated the extraction, incorporation and consumer viability of the fat in personal care products.

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# MEMBERS OF STAFF

# A MESSAGE FROM THE HEAD OF SCHOOL

The School of Product Design Graduating Projects Showcase and Booklet were launched in 2020, to celebrate the amazing mahi of our first cohort of graduating students. In the 4 years since, it's been amazing to watch as the ongoing changes in our school and the world around us is reflected in the work of our students, and the ever-increasing variety and quality of the outputs they produce.

The 2025 graduating cohort is no exception to this ongoing excellence, with their imagination, creativity, technical ability, and effort to work through complicated problems to find ingenious solutions to wicked problems evidenced in this booklet. I encourage all those who are graduating to take the time to reflect on your years of study and how you've grown and developed over this time, and as you look forward to the challenges ahead, I hope you feel prepared to make a difference in the world.

As much as this is a time to celebrate our graduates, it would be remiss not to acknowledge those who have supported them on their journey. To our academic, technical, and administrative staff, as well as our tutors, design practice teaching fellows, student societies such as ProdSoc and GameDevSoc, and the many others who are directly involved in the delivery of knowledge and pastoral care of our students, thank you so much for all that you do, and I hope you take pride in your part in helping our graduating class reach this point.

Congratulations to all who are featured in this booklet. On behalf of the UC School of Product Design I wish you every success in your future careers. Please stay in touch and feel free to visit anytime. We always love to hear about the amazing work you are doing.



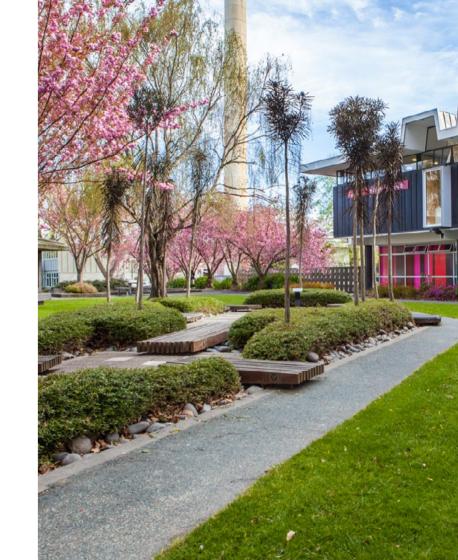
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SURF

CYCOLOGY

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Well done to the graduating cohort of 2024!

### **GET IN TOUCH!**

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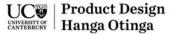
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