

BMW GROUP + QUT  
DESIGN ACADEMY



MAY 2022

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Program Updates  
Feature Article  
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NEWSLETTER

BMW  
GROUP





# WELCOME



We are getting close to the middle of the year and already we have achieved so much! It's wonderful to have a lot of positive activity in our new offices, Alpha Studio and Beta Lab. This activity is driven by our Work Integrated Learning (WIL) interns advancing their exciting projects, the Impact Lab students working with us on some interesting concepts, as well as our BMW Group + QUT Academy Design Associates working under our Special Projects Program alongside the BMW Group and idealworks teams on new future vision ideas. Simultaneously our Research Associate continues to progress with his investigation into social interactions of automated robots in manufacturing contexts. His expertise is being recognised at the university level with an invitation from the CLEVAR (Cognitive and Learning Environments in Virtual and Augmented Reality) Research Group at QUT to present on some of his insights in the field.

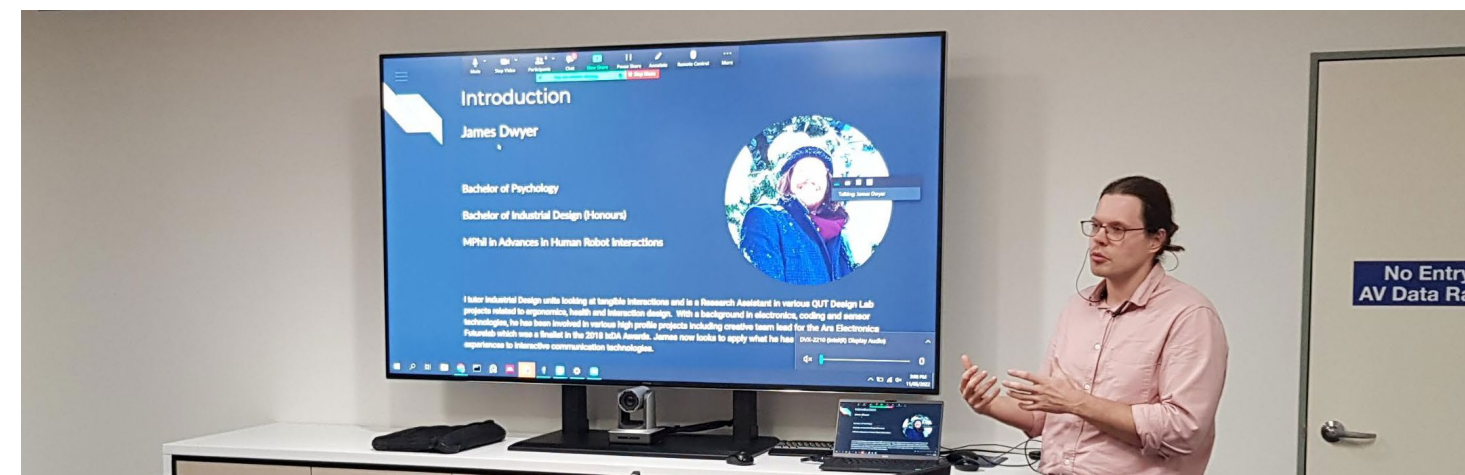
There is so much going on we can hardly keep up with posting blogs and news events. We have a really exciting backlog of posts and announcements from the last few months that we will be sharing on our website and social media pages in the coming period. These cover important initiatives including details regarding one of our latest Special Projects with BMW Group, our WIL internship and Impact Lab final projects presentations, and a host of insights about some of the AR and VR projects we presented during the BMW M8 car unveiling. So, make sure you keep an eye out for those stories and more in the coming weeks!

For now, enjoy our features and updates in this month's newsletter.

All the best,

Dr Rafael Gomez  
Founder & Academy Lead

# PROGRAMS



## INTERNSHIPS

The Internship program focuses on Fostering Design Excellence. It offers high-performing QUT design students an opportunity to advance their learning through real-world projects, and provides a pathway for paid internship placements at BMW Group in Munich, Germany.

### Academy Internship Initial Concepts

Early this month our four Academy interns presented their initial concepts to the Academy team and other interns. They are all making excellent progress so far, impressing us and our BMW Group colleagues over in Germany.

Magnus Schultz has been exploring the future of autonomous supercar interior design. He has been focusing on the core experiences and emotions of driving a supercar and how these can be enhanced or facilitated in an autonomous driving context. Using Gravity Sketch he has modelled the interior of our M8 Competition as a base to model his own design over. Magnus will then present his final design in VR, with the users sitting in the M8.

Henry Gomez-Borowski is working on an idealworks iw.hub peripheral design. His project direction has led him to explore using a series of external sensors in a BMW Factory as a way to inform iw.hub robots of objects and movement that are out of their immediate field of vision.

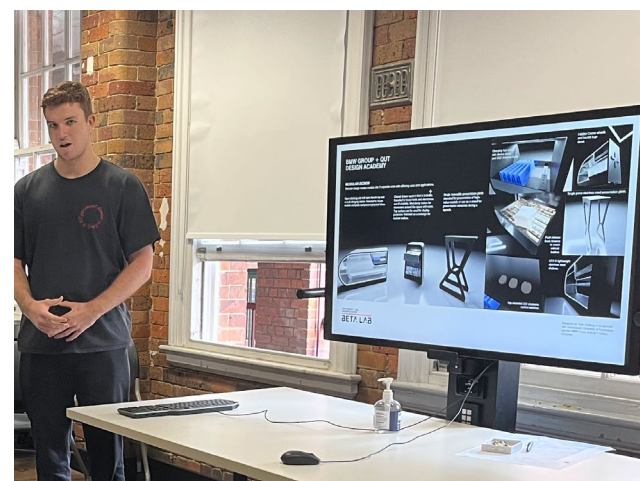
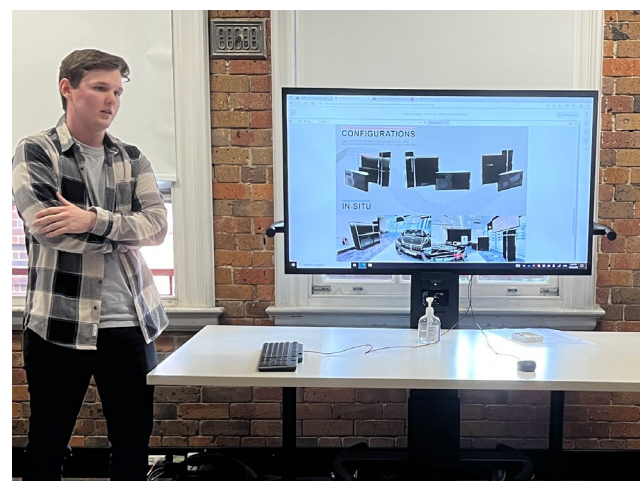
Lastly, Ashley Fenton and Elizabeth Moss presented their work so far for the re-design of an internal app used by many BMW staff around the world. As this project is confidential, we aren't able to share images or details.

However we can share that they received great feedback from our colleagues at BMW and the wider team involved in this project. The work that Ash and Liz are doing will have a very positive impact on BMW Group staff who use this application.

#### Impact Lab 4 Unit Concludes

This month the four students that were completing Academy projects for their Impact Lab 4 unit have wrapped up, presenting their designs for Academy digital interactions, Academy storage and presentation units, plus the next stage of the Academy management app first presented to us in IL4 last year.

We'd like to thank Ethan Brown, Harry Newberry, Tyler Hocking and Toby Benson for their efforts this semester. They have come up with some great ideas which we will look to develop further and hopefully implement in the future.



#### RESEARCH

The Research program centers on Exploring Knowledge Horizons. We have initiated a progressive research agenda for PhD and MPhil students to conduct world-class research through the Academy.

#### James Presents at CLEVAR

Our Research Associate, James Dwyer, presented to QUT's CLEVAR Research Group (Cognitive and Learning Environments in Virtual and Augmented Reality) this month James was invited by the CLEVAR team to chat about his research and his use of VR and AR in advanced interactive contexts. We look forward to the research outcomes and presentations.

#### SPECIAL PROJECTS

The Special Projects program pioneers world-first projects by Advancing Cutting-Edge Technologies. It is tailored for professional design graduates to work on advanced R+D projects for real-world applications. These projects are established by BMW Group in Munich and are supported by the Special Projects team at the academy.

#### Future Visions

Our Design Associates recently completed a design sprint where they came up with some future vision concepts for a key BMW Group product. We aren't able to show much of this project just yet, as is the case with most of our Special Projects, however when the time comes we will share plenty of photos. So far the response from our colleagues about the work we presented has been very positive.

#### Brisbane BMW

While our collaboration with the Brisbane BMW dealership is only a few months old, the strength of the partnership is rapidly growing. The newest update is a new Augmented Reality project for the dealership; we will be developing an AR experience, similar to what we created for the M8 Competition launch event, for the local launch of the new BMW 7 Series. Our Design Associates will create and build the AR experience for the invited guests to experience at the launch. We are very much looking forward to sharing details and images of this once completed.



# FEATURE



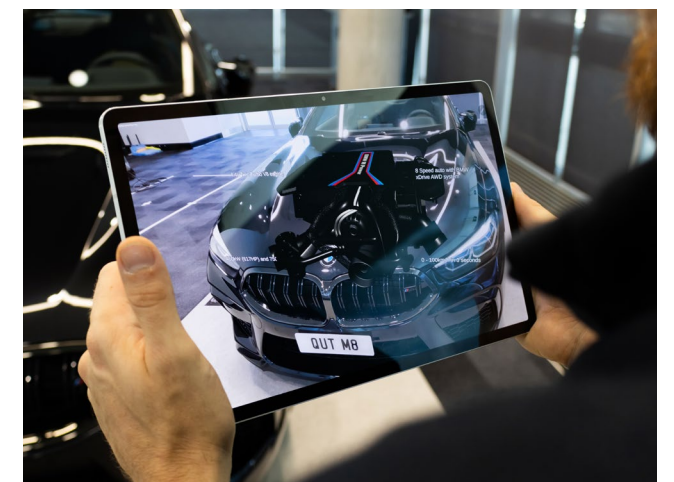
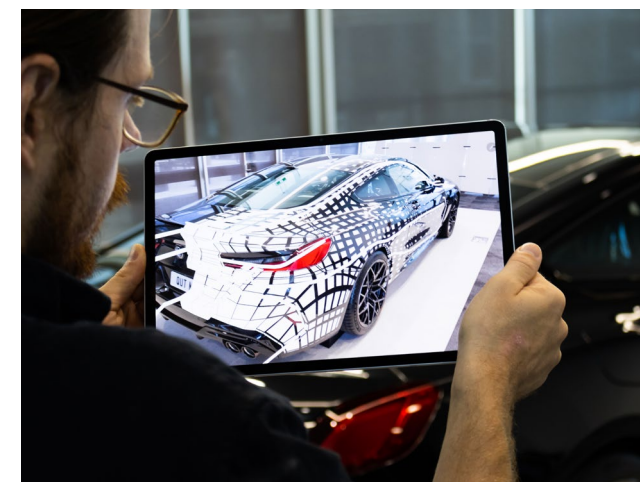
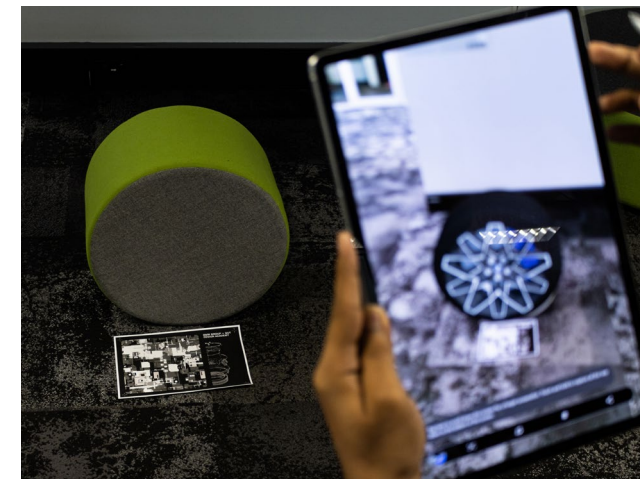
## BMW M8 COMPETITION COUPE IMMERSIVE + INTERACTIVE EXPERIENCES

Tim Lim + Epi Pereira  
Design Associates

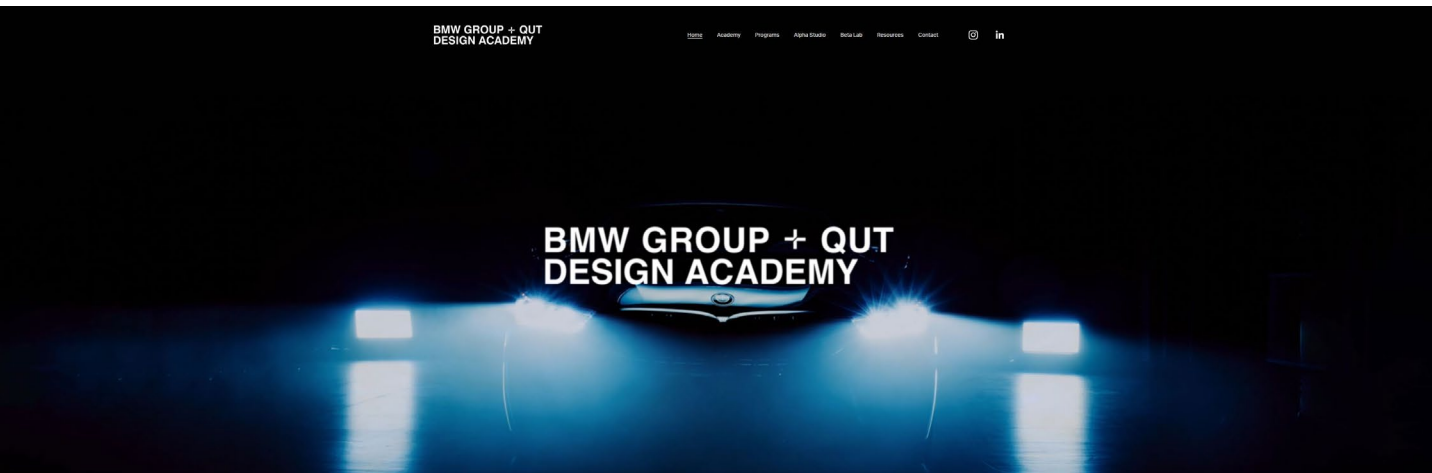
In last month's newsletter we talked about one of our new workspaces located at QUT Kelvin Grove, the Beta Lab. During the renovation of the room early in the year, we took the liberty to create a virtual reality (VR) experience that connected our newest research space with a BMW Factory. This was done in time for the launch event of the M8 Competition Coupe. The Academy team constructed a VR experience using digital twins of the Beta Lab and one of BMW's vehicle manufacturing facilities. In VR, you are able to walk through the Beta Lab, then be transported to a virtual section of a BMW Factory in Germany. This virtual world was created to allow guests to experience a BMW factory, and to show some of the skills and knowledge that the Academy team has. The VR experience includes many of the hundreds of 3D assets we have created for BMW Group to assist their autonomous mobile robots (AMRs) with image detection, recognition, and classification.

We also challenged ourselves to showcase some features of the M8 through AR (augmented reality). We explored several directions and converged on three elements that reflected technology, design and engineering. We chose to the wheels, the powerful V8 engine, and to highlight the unmistakable form of the vehicle's body surface. These separate experiences were created as 3D animations and scaled perfectly to align with, or over, the physical car. These AR experiences are a good exploration into the use of the technology in design, and we plan on leveraging these technologies and the vehicle into new research projects with students at QUT.

Blog posts will be uploaded to our website shortly, covering more of the behind-the-scenes processes and how the team created the VR and AR experiences.



# BRIEFINGS



## ACHIEVEMENTS

- Refreshed Academy website launched - go check it out! [www.bmwgroupqutdesign.academy](http://www.bmwgroupqutdesign.academy)
- James invited to present to QUT CLEVAR research group
- Academy interns present their initial concepts to Academy and BMW Group staff
- Impact Lab 4 students conclude their Academy projects
- Preparation for RACQ MotorFest event (Sunday 19th June, Brisbane RNA Showgrounds)

## EXTERNAL COLLABORATIONS

This month we saw our list of external collaborations really start to take off. The first is our collaboration with the Brisbane BMW dealership; the connection providing us with access to BMW vehicles and opening doors to future events and special occasions. Examples of this include the access to the iX and iX3 cars for students in the Future Transport unit (as seen in our April newsletter) and having an iX at our M8 Competition launch event. An official MOU between QUT and Brisbane BMW is being developed which will include further outcomes and opportunities for QUT staff and students.

Spawning off the Brisbane BMW partnership is our connection with the BMW Club QLD. We're currently discussing some ways we can be involved with the club, including presentations, hosting club meetings, club events such as car shows, and also an annual competition for QUT staff and students.

We have also been personally invited by RACQ to attend the RACQ MotorFest event in mid June, with our M8. The MotorFest is a huge annual event focused on all things automotive: prestige, vintage, unique and

collector vehicles, plus the latest in vehicle and transport technology. It attracts tens-of-thousands of people, so understandably we are quite excited to have the opportunity to promote the Academy and show off the M8 at the event in the Future Zone section. While not an EV or 'car of the future' as such, we will be able to share how the M8 will serve as a platform for QUT students to test and develop ideas for automotive and future mobility designs.

More broadly at QUT we are working towards the QUT Open Day in July, hosting visits and presentations to high-school students, and lastly how the Academy can be involved during the QUT Design Lab Design Week and student run clubs such as QUT Reality Labs. There's lots of exciting things in the works for the second half of this year, so stay tuned for more info on each of these as they occur.

## BMW GROUP PARTNER UPDATE

Dylan Sheppard  
Digital Design Lead, idealworks

Spring in Munich is in full swing! It's trade-show season in Europe, with the idealworks team working hard to prepare for a big couple of months of demo's, presentations, and conventions.

While we wait for the ramp-up to begin on our multinational internship program, we're continuing to push the envelope with remote projects, collaborating between the idealworks teams and our Academy Design Associates. Recently, exciting work has been undertaken focusing on new concept generation, exploring periphery devices for smart logistics, and enhancing the user experience of AMR technology through HMI experience design. All very exciting topics, and great to see what our Academy designers can develop in such a challenging context, and in a short timeline.

We're looking forward to having more QUT designers here in Germany soon, lots of exciting topics in the works!



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