

BMW GROUP + QUT  
DESIGN ACADEMY

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MAY 2023

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# NEWSLETTER

BMW Concept Touring Coupé images sourced via <https://www.presse.bmwgroup.com/global/article/bmw-touring-coupe>



# WELCOME



It's always exciting to see our interns complete their exciting projects through the BMW Group + QUT Design Academy Internship Program. In May we saw all of our interns - 4 students through the WIL Internship, and 2 students from the Impact Lab 4 program - finish and present their projects. Congratulations to all of the students for a fantastic semester. We were very impressed with all the projects and are continuously delighted to note the improvement in quality with these projects. Make sure you check out their reflections on their experiences in our Blog section of our website.

It's also great to see our Special Projects work with Hams Hall in the UK advance further. We are nearing completion with this project as we refine and polish off the project. We can't wait to give you a deeper insight into this super exciting that we've worked on for over 6 months once we are able to show it off publicly!

Finally, it is sad to be saying goodbye to two of our current Junior Design Associates, Daniel Fisher and Jacob Ho. Daniel and Jacob were brought into the team to assist with our current major project with Hams Hall and their skills and capabilities have been important to supplement the core team involved in the project. They have been an incredible part of the team and we will miss them. Nevertheless, we wish them all the best in their future and hope we can work with them again. Make sure you check out Daniel's reflection on his experience in our Feature article in this newsletter.

Enjoy the read!

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 Semester 1 Interns Graduate

This month our Semester 1 2023 Academy WIL interns presented their final design concepts to us. All four of them have done an exceptional job and presented some high quality work.

Max Malouf chose our future autonomous supercar interactions project. He presented us a concept for an autonomous ambulance 20yrs from now, which he defined as the new type of supercar. His design responds to key design problems and opportunities identified in his research with paramedics. The ambulance service is called through an app, and features tech throughout the vehicle to aid the paramedic staff.

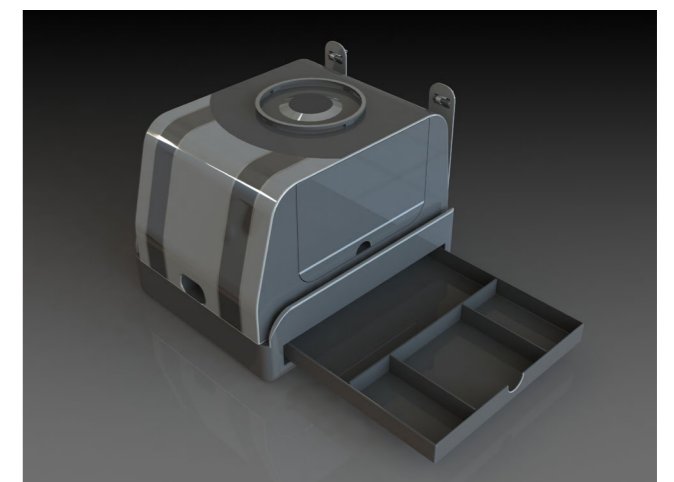
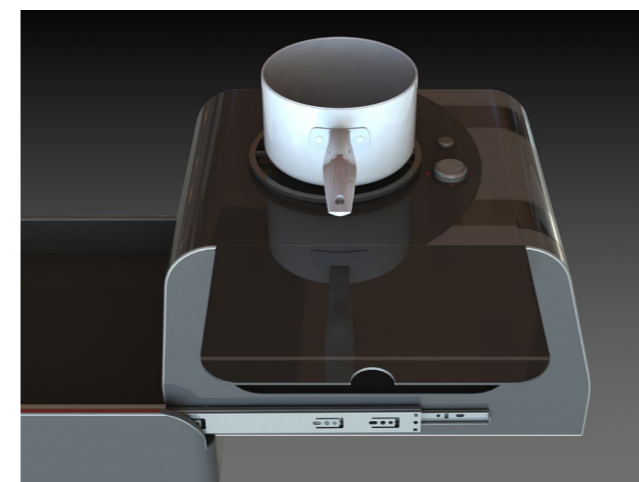
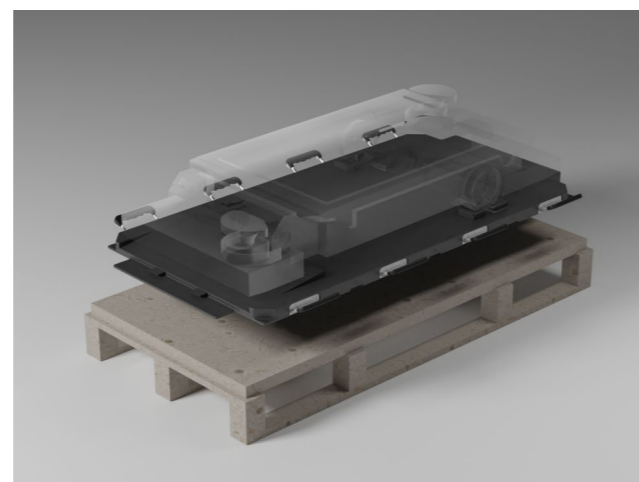
Olivia Caulfield and Weibo Ye designed an interactive billboard alongside BMW staff in Germany - another interesting project and great opportunity with our friends in the Digital Products department at BMW. Like previous BMW projects, this one is also confidential as it's an ongoing project.

Lastly, Finn Pohlner designed the iw.sled as part of our iw.hub robot packaging design project. He focused on the task of lifting the robot off a timber pallet, and lowering it to the ground when unboxing. While it sounds like a simple process, the weight and care required when unboxing and transporting an iw.hub provides some design challenges.



Impact Lab 4 Projects Conclude

Also this month was the conclusion of our Impact Lab 4 projects. Jonny designed a roof rack system for a BMW M8 vehicle, allowing the owners to enjoy camping and other outdoor activities due to the new storage and transport abilities the roof rack offers for the vehicle. Aantra also designed a vehicle camping accessory, but instead targeted it towards young adults who own MINI Cooper vehicles. Her camp kitchen makes basic day trips or overnight camping experiences more accessible for the target audience, who likely don't own 4x4s or specialised camping equipment.



## 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.

### VRES

There are ongoing projects that we are working on as part of our Research Program. This includes establishing PhD's across Design Thinking and Innovation as well as two really exciting projects with future vehicle Human-Machine Interfaces. We're also excited to announce that we are nearing the publication of our research paper that we led through the Vacation Research Experience Scheme (VRES) earlier in the year. Talented QUT ID graduate, Liam Georgeson, was involved in developing this unique research focusing on Thermoception in Virtual Reality Prototyping. It's a cutting-edge space that explores the ways multimodality can be utilised in mixed-reality (XR) contexts to enhance interactions and interactive techniques. With the advent of digital twins, these kinds of concepts and approaches are important to help expand digitalisation capabilities within industry 4.0 and beyond. Further, we are excited to announce another major milestone for the Academy in the coming weeks, which will further leverage our research capacity into the future.

## 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.

### Continued Work for our Design Associates

We continue to dedicate most of our time to the Hams Hall project. There has been significant R+D, learning and iterations required so far, as we push ourselves to reach a detailed and high standard of work. One of the areas we are focused on currently are BMW workers throughout the video; it is critical that they appear lifelike in their movements, and are wearing the correct uniforms. We are exploring software which allows us to create the uniforms and the animated humans, in addition to motion capture systems.

Our contributions to the 3D viewer of the idealworks iw.hub robot have almost wrapped up, with our portion of the project likely to finish in early June.

### SORDI Animation Now Public

In our last newsletter we mentioned two new animations created for the SORDI project and BMW Tech Office team. The first of those was an animation to illustrate how Tech Office exploring a point cloud pipeline, whereby digital twins can be generated using Artificial Intelligence and point cloud data from 3D scans of existing factories. This animation is now public, and can be viewed [here](#), or on the [Special Projects page](#) of our website. The purpose of the project is to ultimately accelerate the creation of digital twins. Artificial Intelligence is used for scene reconstruction in the digital twin, and to place assets throughout the environment. It does this by using existing object recognition methods and 6D pose estimation, which allows the AI to determine elements such as if the containers are filled or empty, the age of the asset and how the object is arranged.

# FEATURE



## A SPIRITED DESIGN TEAM

Daniel Fisher  
Junior Design Associate, February 2023—June 2023

Typically, it takes around 6 to 12 months to fully adjust to a new position or role, considering the various factors involved. Due to the unfortunate cancellation of my internship to BMW Munich caused by the pandemic, the team graciously offered me a short-term position at the Academy instead. Surprisingly, even within just a few months here, I already feel a profound sense of belonging, as if I'm right at home. Sadly, the time has come for me to say goodbye.

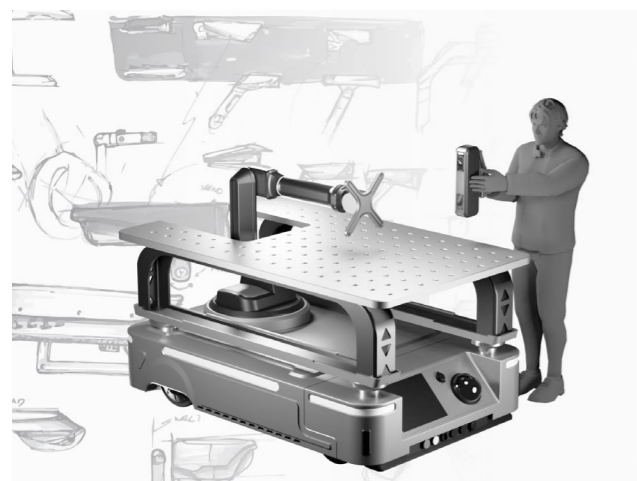
When I joined the team, I wasn't quite sure what projects I would be working on. However, knowing that I would be collaborating with Jordan, Epi, and Tim, it didn't matter much to me. I recognized the abundance of talent and skill within the team, and my primary goal was to learn as much as possible from them in a short time while contributing to the projects to the best of my abilities.

As a junior designer entering the industry, it can be daunting to find a balance between utilizing existing skills and acquiring new ones on the job. This balance is crucial for the growth and development of new designers, enabling them to build confidence and resilience. The Academy has cultivated a workplace culture that encourages this equilibrium, demanding high levels of output while fostering resilience and continuous learning. In just three short months, I have witnessed tremendous growth in my technical skills, expanding my industry knowledge, and honing my teamworking abilities. Without the unique culture at the Academy, I don't believe I would have gained as much from my time here as I have.

At first glance, the BMW + QUT Design Academy might give the impression that it solely focuses on automotive design. However, it offers so much more. I've had the incredible opportunity to collaborate on projects with global industry partners, exploring a wide range of subjects such as digital twins, MetaHumans, animation and rigging, autonomous robot concepts, AI design workflows, motion graphics, and XR applications. Yet, the best part, in my opinion, has been immersing myself in a team of individuals who live and breathe design. It means that every day at work, we share knowledge, explore ideas while grabbing coffee, discuss newly released software tools, and contemplate how to leverage them in our design process. This, to me, is the most valuable takeaway—the spirit of design that the team instills in their projects and in each other.

Although I won't be working with the team anymore, I won't be going far. I am immensely grateful for my short time spent with the team and eagerly look forward to witnessing the future achievements of my friends and colleagues.

Raf, Jordan, Tim, Epi, Mike, and James, thank you for your warm hospitality, patience, and genuine interest.



# BRIEFINGS



## ACHIEVEMENTS

- Academy Semester 1 WIL interns finish
- Impact Lab 4 students complete their Academy projects
- Academy Games Design Capstone students approach midway presentation

## EXTERNAL COLLABORATIONS

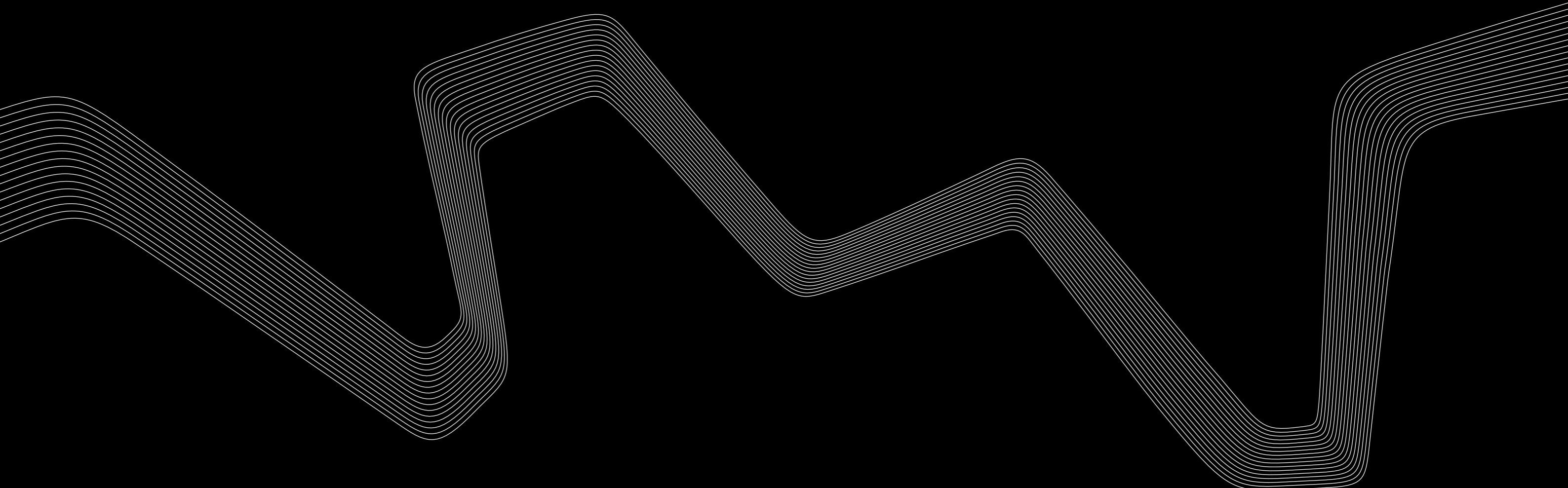
Early this month we hosted Levi Swann's Personal Transport unit, who had a guest lecture by our Founder + Lead A/Prof Rafael Gomez. The lecture was about aesthetics and styling, with particular attention on the value of it and how to apply it to a design. Of course BMW vehicles were used as examples, including our M8 Competition vehicle. This is the second time we have hosted Levi's unit, giving students the opportunity to see the M8 vehicle to take inspiration and dissect each element of the car in order to better understand the various design elements.

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