

**BMW GROUP + QUT
DESIGN ACADEMY**



FEBRUARY 2023

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NEWSLETTER



WELCOME



February has started off incredibly exciting. The end of 2022 and start of 2023 has kept us very busy with the completion of our first ever summer internship group as well as a really cool Special Project with BMW Group in the UK. We're already looking forward to what 2023 will bring and don't forget to head to our website to read my latest blog outlining our major goals and initiative this coming year.

We're lucky to already have a range of exciting activities, initiatives and events confirmed for the year. The Beta Lab continues to be a great space for events and we have some super cool additions to help showcase our amazing designs - we can't wait to present these to the world soon!

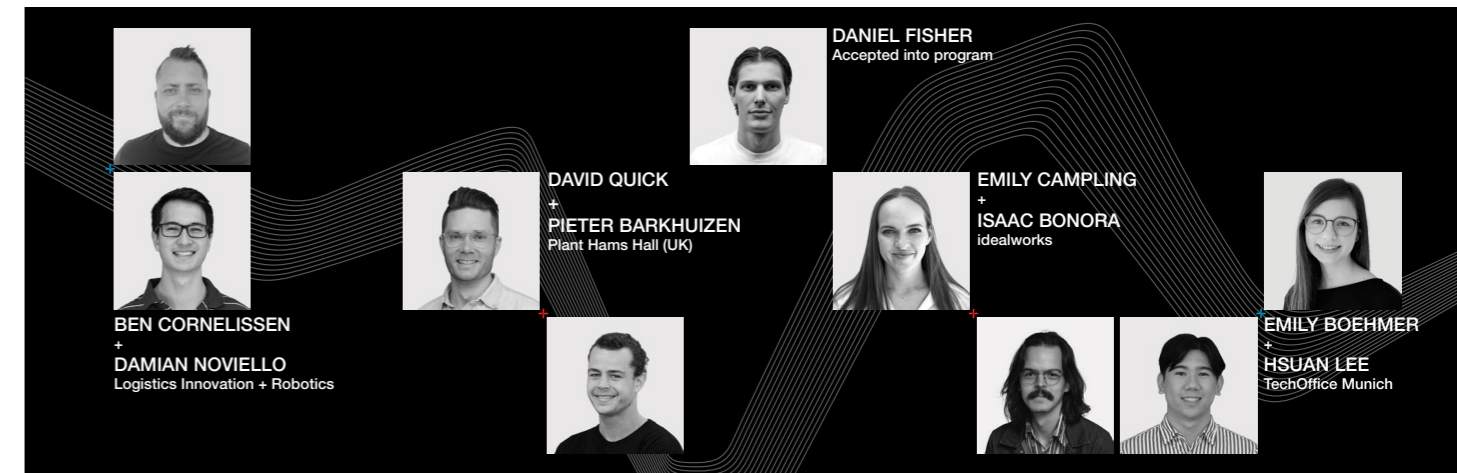
Although it is only February, we are also ramping up with our internship program for Semester 1, 2023. We look forward to the applications, and if you are a QUT design student in Industrial Design, Interaction Design and Visual communication Design student and have questions about the applications please don't hesitate to contact the Academy team (via: info@bmwgroupqutdesign.academy).

Lastly, we are excited to welcome Daniel Fisher to the Academy! Daniel is an Industrial Design graduate and has joined the team this month as a Junior Design Associate, working with us on our Special Projects and Internship programs.

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.

Summer Semester Internships Conclude

This month we said farewell to our three summer semester Academy interns; James Boughen, Jake Day and Kilian Frunz. All three students presented their final designs to the team and our BMW colleagues, exceeding our expectations and showing us that they have really strengthened and advanced their skills while part of the team. Head over to our website to see each of their blog posts and some images of their final designs.

2023 BMW Internships!!

After a few years of travel restrictions and disruptions causing us to press pause on our BMW internship program, we're excited to say we are resuming the program this year! We have a total of 8 students traveling overseas for paid internships, plus a new team and a new country, too!

Based in Munich is the TechOffice team; formerly known as Innovation Lab and a team we have placed multiple students in before. We congratulate Hsuan Lee and Emily Boehmer for joining TechOffice as Design Interns for 2023. We'd also like to acknowledge Daniel Fisher, who was accepted into the program and a position in TechOffice, but unfortunately cannot complete the internship any longer. Damian Noviello and Ben Cornelissen are Design Interns in the Logistics Innovation + Robotics team in Munich (also an existing team we've placed

QUT students into). Isaac Bonora and Emily Campling will be working at idealworks in Munich. Isaac will be joining the team as a Digital Design Intern, while Emily will be working as a Hardware Design Intern. Lastly, and a first for our BMW Internship program, is the placement of two at Plant Hams Hall in the UK. David Quick and Pieter Barkhuizen are the 2023 Design Interns at Plant Hams Hall. David started work in December last year, while Pieter will be starting his UK internship soon.

2023 Games Design

Lastly, we can now mention that we will be facilitating a live BMW Group project to the 2023 QUT Games Design students completing their capstone project. This project opportunity to explore concepts for in-car infotainment features and experiences has come through the infotainment innovation team within BMW, which a number of our previous Academy interns have worked alongside on various UI and UX design projects. This project will be under NDA until 2025 so unfortunately we won't be able to say too much until then. The four students accepted into this project will also be announced in our next newsletter.

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 Dwyer MPhil Thesis

Following our recent updates of previous Academy Research Associate James Dwyer completing and submitting his Masters thesis, we have received news that he has received approval of his Masters thesis. James' thesis has now been published and is accessible via the Publications page of our website. His research investigated 'Advances in Human-Robot Interactions for Advanced Manufacturing', with a particular focus on social cues and interactions between autonomous logistics robots and factory workers. The final step for James is his graduation ceremony. Congratulations James on your accomplishment and best wishes for the commencement of your PhD.

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.

A Busy Month

This month we have jumped straight back into our Hams Hall project, taking on board the feedback from BMW (plus our own notes for what we want to revise in Part 2). We are wasting no time getting stuck into the items on our very big 'to-do' list for this project. In addition to this we have started a new project with idealworks, working on some Augmented Reality concepts for their iw.hub displays and demonstrations at trade-shows. The Academy team will be working alongside Dylan Sheppard and Isaac Bonora (2022 QUT graduate and 2023 BMW Group intern).

FEATURE



HAMS HALL 2030 FUTURE VISION

Jordan Domjahn + Epifanio Pereira + Tim Lim, Academy Design Associates

Last year we were approached by Christian Poss, the Digitization and Innovation Manager at Hams Hall. BMW Plant Hams Hall is an engine manufacturing and assembly plant in Birmingham, United Kingdom which supplies drive units for BMW, MINI and Rolls Royce vehicles. Christian told us about a 2030 future vision project that Hams Hall management had developed, which needed to be visualised and available in a digital format for internal use and external promotion. After a series of discussions and planning meetings we officially kicked off a new Special Project at the Academy: the 2030 Hams Hall Future Vision. The deliverable that we have been tasked with is a 3 minute animation which illustrates the future vision for the Hams Hall factory. As we write this blog in February 2023, we have just submitted Part 1 of this project – a medium resolution animation. Part 2, which we are aiming to deliver in early August, is a higher resolution video (further detail in the models and more visual realism).

As we are currently gathering our thoughts and feedback on the Part 1 submission, we wanted to take some time to note down each of our thoughts and experiences when completing the first part of this project. While we can't show or say a whole lot about Part 1 just yet, we can speak about the project in a general sense. We have already started working on part 2, and we are incredibly excited to see the video come to life and share it with you and the wider public in due time.

Epi – Crafting the Vision

Animation is a fascinating medium that can bring characters and stories to life in ways that are impossible with live-action films. Ever since my first year at Uni, I've longed for the chance to work on future vision film for a company pursuing excellence in their craft. This year, for the first time, I find myself on a team visualising

BMW's vision for a lean, green and digital future. My role involved planning, research and development, scene building, and animation. However, the aspect that I found most fulfilling was the chance to work on producing style frames and establishing a storyboard with a cohesive visual design language.

Style frames are essentially a blueprint for an animation sequence, providing a detailed visual representation of the look and feel of each scene. They play a crucial role in the development of any animation project, as they serve as the foundation for the final product. The process of producing style frames required a combination of technical and creative skills. First, I needed to develop an understanding of the brand, its values, and its target audience. Then, I had to bring this understanding to life through the creation of detailed sketches, mood boards, colour palettes, and composition studies. These visual references helped to communicate the intended aesthetic and the overall mood of the animation. We work flexibly at the Academy, as our perspicacious design approach broke down complex requirements into simple visual cues – which provided a stable foundation for mood boarding and eventual style framing.

After communicating our initial direction, we began iterating and producing different style frames. Once signed off, we proceeded to composition, then models, materials, lights and finally motion. One of the most exciting aspects of producing style frames was the chance to experiment with different visual styles and techniques. This allowed me to explore various options and find the perfect style for each scene, as well as each of BMW's three vision pillars. It was an incredibly rewarding experience to see the project come to life through the style frames and to know that even simple material experiments can play a key role in shaping the final product. The process of producing style frames was also an opportunity to collaborate with other members of the team, including the 3D modellers, texture artists, and animators. The clear visual references provided by the style frames helped to ensure that everyone was working towards the same vision, leading to a more cohesive and polished final product.

In conclusion, my experience working on the animation project for BMW was a fulfilling and exciting opportunity. It allowed me to utilize my creative and technical skills to bring the vision to life and collaborate with other members of the team. I am grateful for the opportunity to have contributed to such a unique and innovative project and have had the chance to practice a new set of skills.

Tim – My Experience

In late 2022 we were tasked with producing a futuristic factory animation for the BMW Plant Hams Hall, situated in Birmingham, UK. To begin we conducted research to understand the significance of the plant for BMW and its goals for the future, particularly by 2030 and beyond. Our investigation covered the plant's inception and noteworthy achievements since its establishment, and we held regular meetings with personnel from Hams Hall to shape the vision of the facility in 2030. Developing a script was a crucial aspect of the project, as it served as the foundation for all visual elements in the initial draft. While it was essential to provide detailed descriptions in the script, we relied on the visuals to convey most of the intended message. Our team brainstormed and examined different possibilities for what a BMW factory of the future could look like, guided by three primary criteria: being lean, green, and digital. Using reference images and videos we created preliminary storyboards that were timed to the script and formed the first version of the animated video. We combined 2D and 3D techniques to create a draft video, allowing us to evaluate the timing and visuals of the project. Designing and creating the assets was the most enjoyable aspect of the project for me, personally. Using basic primitive shapes, I began by blocking out some scenes and establishing the composition with camera angles and basic lighting. I remained as faithful as possible to the reference materials and storyboards. To keep within project constraints, we divided the frame length of each scene, enabling us to time the script and camera movements as accurately as possible.

Jordan – My First Animation Project

This Hams Hall project is something I was really excited about when we started the discussions last year. This is the first large animation project I have been involved in – so I knew there was going to be a lot of learning, but also a lot of designing, creating and fun to look forward to. So far it has been a positive experience, and working alongside some talented people (Epi, Tim and now Dan in the office, plus Jacob doing casual work at home) has made it even better.

Having not done an animation project like this before, and not being seasoned professionals by any means, we just followed a design process that was logical to us, and I guess familiar or natural to us after our Industrial Design degrees. Our process involved a lot of exploring and synthesising ideas, constant iteration and refinement, regular feedback and communications with all parts of the team (Academy and Hams Hall), and plenty of mini checkpoints and stages that served as minor deliverables. Doing all of these things seemed like the right way to achieve the result that BMW was after, and the result that we were pushing ourselves to reach. I know we are only half way through, but I'm already so proud of the team and what we have created in such a short time.

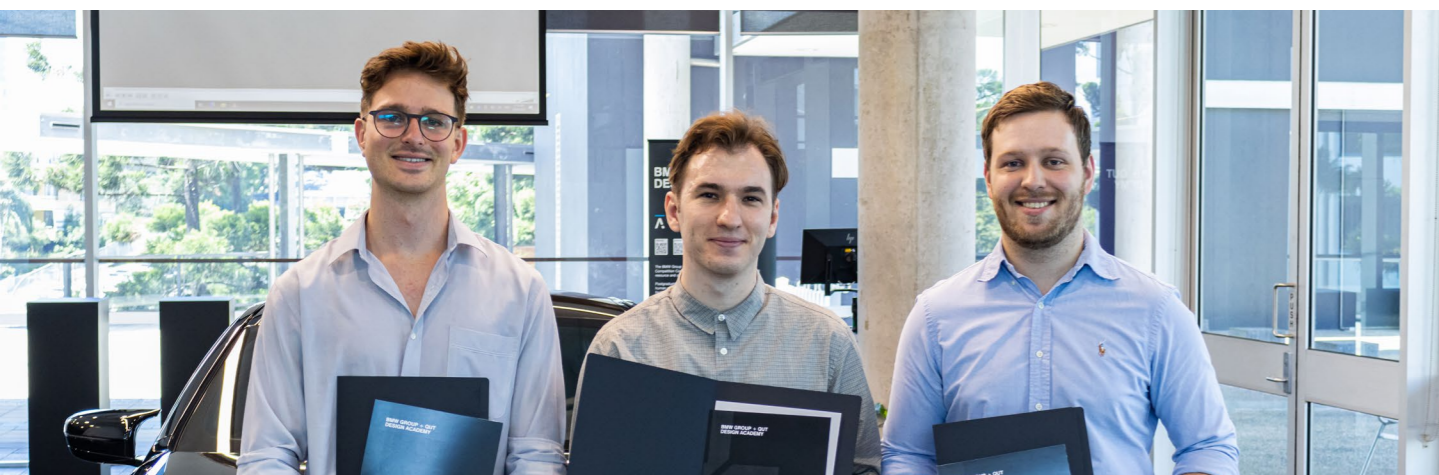
My input to Part 1 was a lot of the planning and organisation, the design and discussions around how to show different elements of the video, plus a good amount of the graphical elements and 3D modelling for different assets within the video. For Part 2 I am really looking forward to refining some of the 3D models, spending more time on designing and creating the large number of 3D assets in the videos (particularly the models that will get a lot of screen time), plus being more hands on with some of the animation output. Working through the different stages, scenes and smaller elements as a team has been really enjoyable, and to me reinforces that design really benefits from teamwork and a variety of skills and passions. I also feel as though the learning outcomes (even just from this short Part 1 project over a few months) has been quite valuable. Specifically things like communication, documentation and general time and project organisation has been crucial to this project being delivered and at a high standard. I certainly feel like I've taken a few steps forward as a team leader and project manager and I'm welcoming the opportunity to solidify these skills during Part 2.

Thanks for reading!

Jordan, Epi + Tim



BRIEFINGS



ACHIEVEMENTS

- 2022-23 Summer Semester Interns complete their internships
- 2023 BMW Group Interns from QUT start their placements overseas
- Preparation for Semester 1 Internships
- Daniel Fisher joins the team as a Junior Design Associate
- James Dwyer receives approval for his Master's thesis, now awaiting graduation

BMW GROUP PARTNER UPDATE

Spring is in the air! As the weather is starting to get warmer - and the days grow longer, lots of exciting things are unfolding at BMW Group and idealworks. This month marked the arrival of our final interns joining our in-situ teams across the Group, with QUT design students joining teams in both the UK and Germany. After an extended pause during the pandemic, we're picking up where we left off with students starting at BMW Hams Hall, Robotics Innovation, Tech Office Munich, and idealworks. As bureaucratic process are being finalised and interns are settling in to their new roles, we're looking forward to many exciting projects and updates over this year!

At idealworks, It's been great to hear some familiar accents among the ten new joiners we've onboarded this month alone. Emily Campling joins our engineering team, branching our partnership into hardware and engineering, while Isaac is settling in to his new role as our latest digital design intern. We're all looking forward to getting stuck into the exciting projects we have in the works, and continuing the successful narrative of these international placement experiences.