Sam Lewis
CAD Designer

Downloadable Portfolio

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on my Online Portfolio

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Contents

About Me

Bio

I am currently a 3rd-year university student currently studying Computer Aided Design. My interest in the subject started at the GCSE level, I then invested more time in the subject during my engineering course at college. During my time on the course, I have also been doing work experience as a kitchen and bathroom advisor where I have been shadowing a designer there.

Aspirations

In the future, I would love to explore my interest in 3D printing and/or engineering so working with a company that covers both would be ideal but not necessary. I would also in the future like to set up my own business that I will go into more detail about later in the portfolio.

Skills and Hobbies

During my time on the course, I have come equipped with the in's and out's of a variety of different CAD software that can be seen below. I have also dabbled in some others such as Photoshop and InDesign building basic knowledge. I am always looking for ways to expand my skill's whether it's with familiar software or if it is completely new to me. In my spare time, I have started 3D printing and learning the necessary programs for that.

Mobile Device Project

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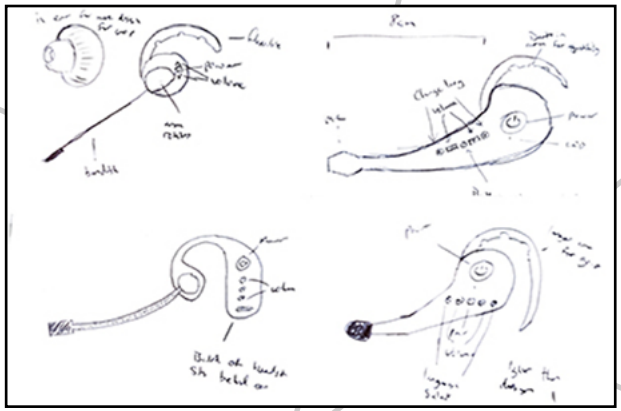
Project Overview

We were asked to create a prototype of a piece of technology that could be mobile, portable, wearable or integrated. It didn't need to be limited to today's technology, but it still had to have an element of realism to it. We decided on an automatic instant translator headset that had an accompanying app. This was one of the first group projects I undertook as part of the course.

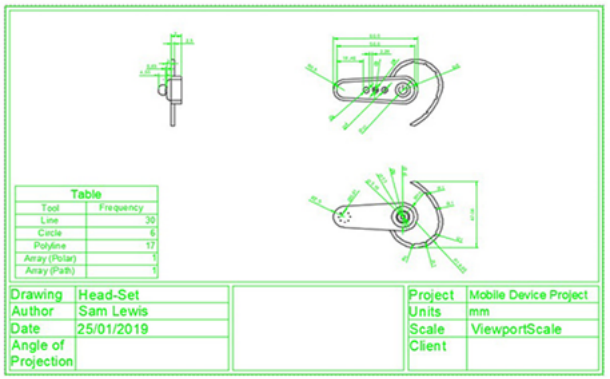


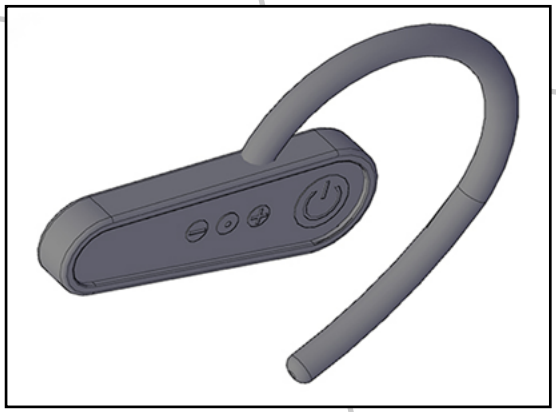
Hand Drawings

I started by coming up with some basic sketches and concepts, at the same time I rediscovered my inability to draw by hand. I showed the team my ideas and implemented the feedback.

Orthographic CAD Drawings

Once a design had been agreed upon I created a 2D orthographic CAD drawing to help develop the design and get a better understanding of the dimensions of the product as it was to scale.





3D Modelling

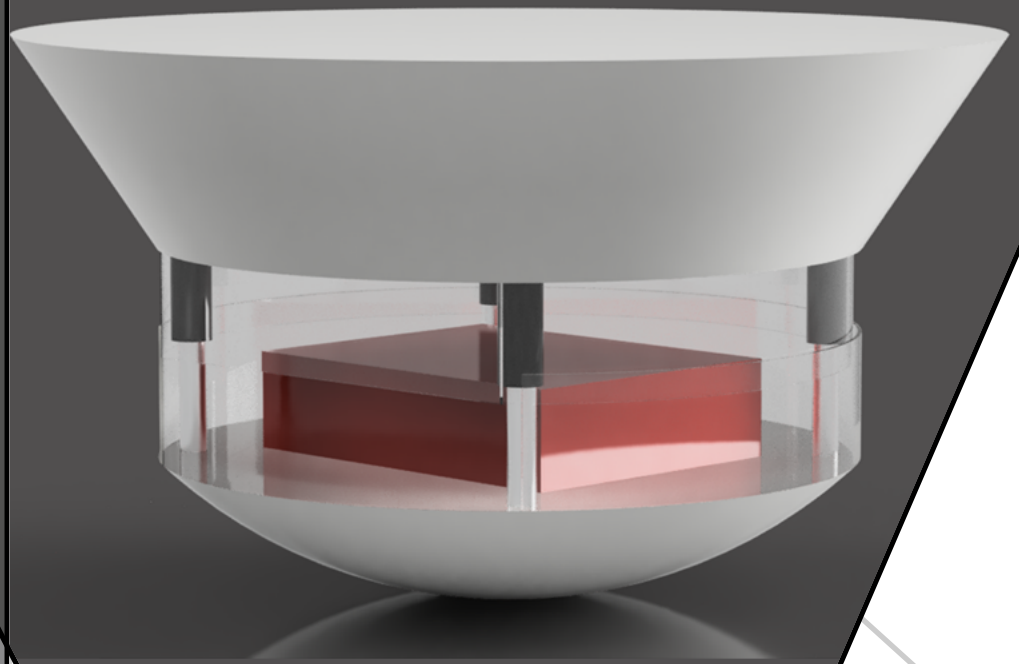
Once I had finished the 2D drawing I started to model it 3D. The software that I used to do this was Autocad, one of the first programs I learnt to use on the course.

Adding Colour

While I was creating the design other members of the team had come up with a colour scheme for the product. I implemented the colours in a way that made the product look interesting but also professional.

Rendering

Once I had finished the 2D drawing I started to model it 3D. the software that I used to do this was Autocad, one of the first programs I learnt to use on the course.



RSA Project

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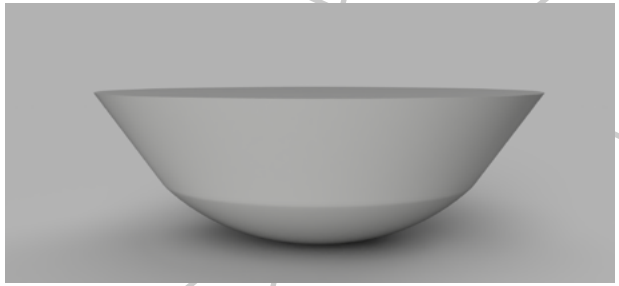
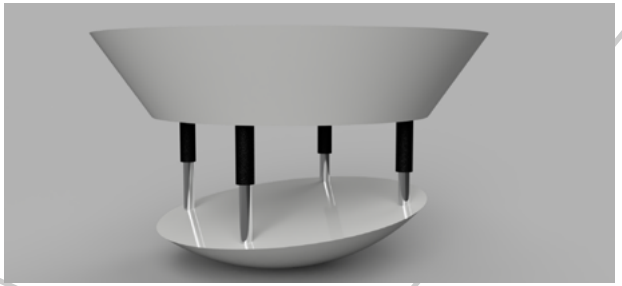
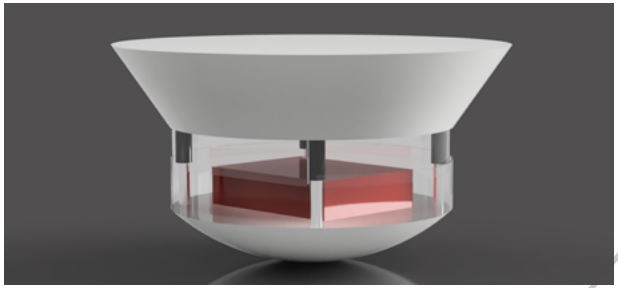
Project Overview and My Idea

For this project, I had to create a submission for the RAS student design awards. Out of a choice of 9 briefs, I chose “A Platform For Joy” which focused on making train stations a more interesting and joyful place. My idea was to implement community and technology into stations. I took inspiration from stations like Zurich in Switzerland where they have markets in the station. I wanted to further this by adding other community-focused activities to stations such as social areas, performers, live music and more. In other areas, I was going to add interactive projectors that would provide light entertainment to help the monotony pass for commuters.

The full downloadable PDF can be found on my portfolio website, follow the QR code on the previous page if you want to see more.







King John's House Project

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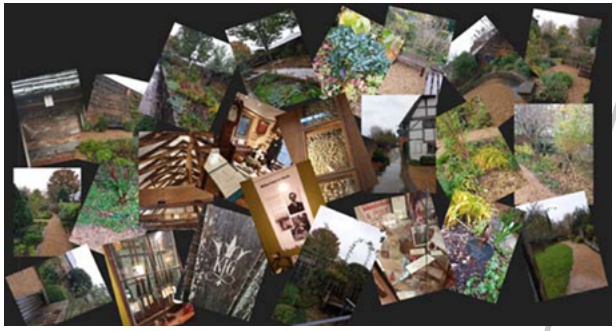
Project Overview

This project doesn't fall under the CAD category but I decided to include it anyway as it was my first client project. We were tasked to help a small museum attract younger visitors and implement some modern technologies. For my contribution, I decided to create a prototype for QR codes to display information on different exhibits. This meant that we could have screens to display information without spending a vast amount of money and visitors would bring their own devices.

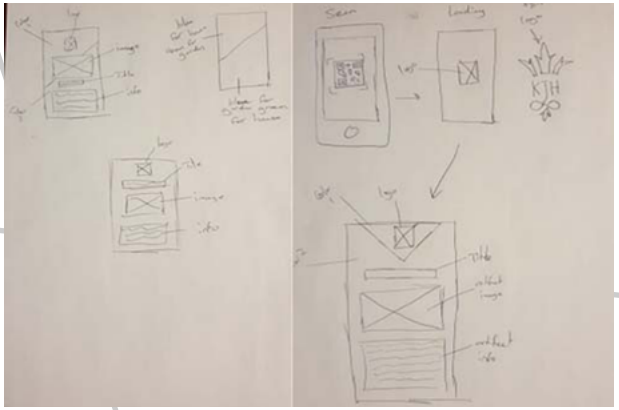


Visting The Client

One of the first things we did was visit the museum to figure out what the issue was that was deterring people from visiting. From the visit, we went away with several ideas that we could try to implement.

Sketching Out My Idea

Once I decided to do the QR codes I started sketching what the information screen might look like. I went through several iterations but settled on a design and colours.

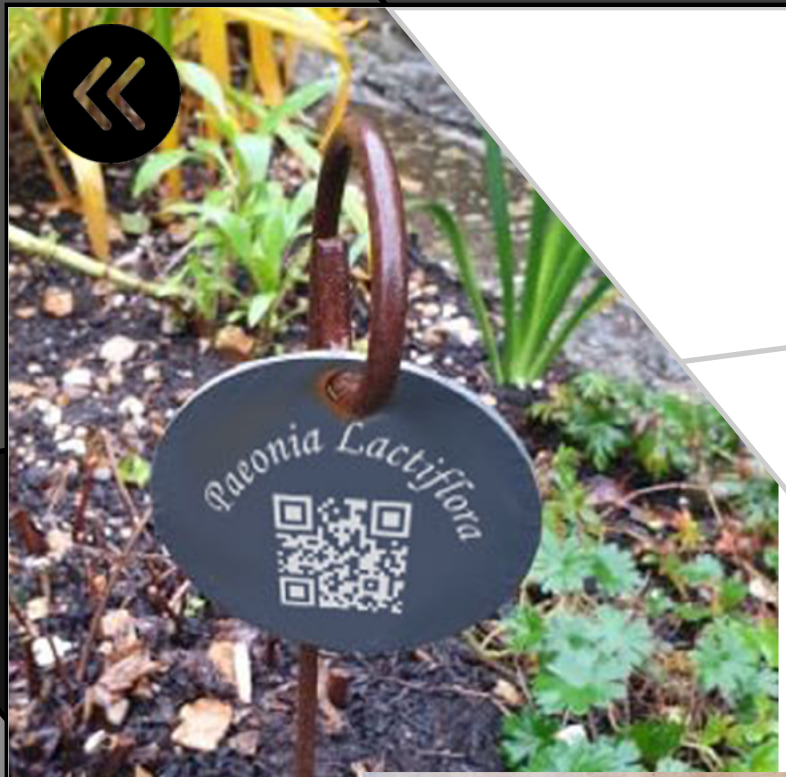


Creating the Pages

Once the design was done I created a prototype of what it might look like to show the team and also the client. It took a couple of attempts to get it right but in the end, I got a design that everyone was happy with.

Creating the QR Codes

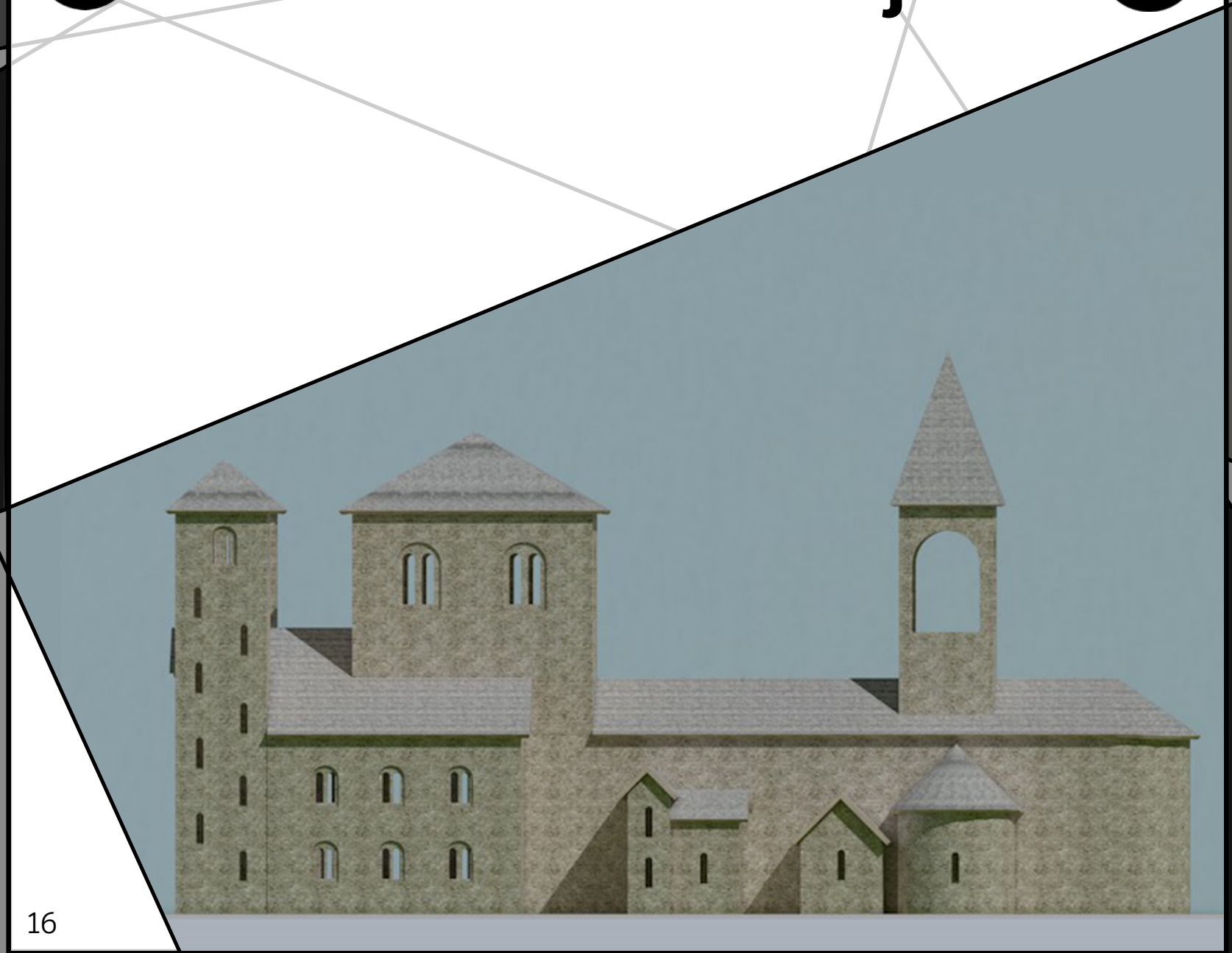
Once I had the idea designs done I worked on creating a number of QR codes that I could link to the page. The one shown was one of the early attempts but does work.



Creating Concept Images

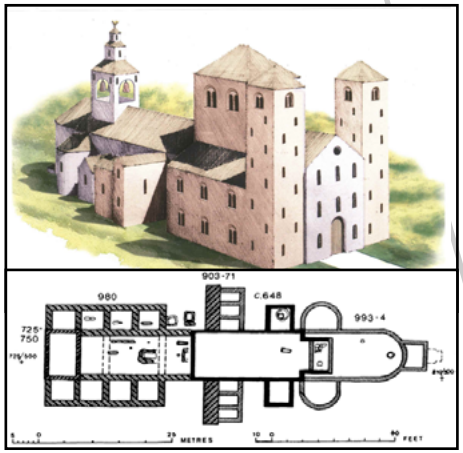
Using PhotoShop I attempted to edit the QR codes onto the labels and exhibits that existed at the museum. The photos were taken from our visit to the client so they are somewhat accurate to what the final display would look like.

Old Minster Project



Project Overview

In this project, I was tasked with recreating a medieval building from Winchester's history. I chose to recreate Old Minster the capital of Christianity around 660 AD to 1093 AD. To create the model I used ArchiCAD, a piece of software that I was introduced to in my third year.

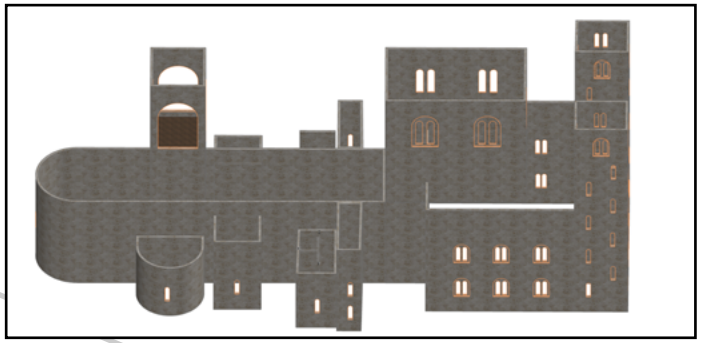


Finding reference material

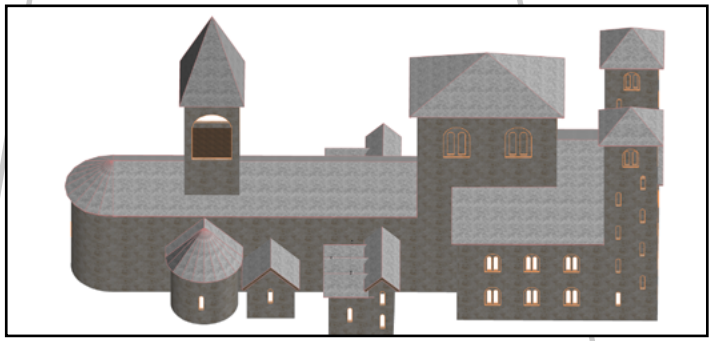
To start I tried to find as much information that I could to get a good idea of what the building looked like and how it was constructed. I was lucky as I was able to find a floor plan like image and many images of other recreations.

Building up the walls

To get the walls right I used the floor plan for the location of the walls and the other images for the height and other information. I did not have all the dimensions so a lot of it was guesswork but I did have some, meaning that I could roughly get them to scale.



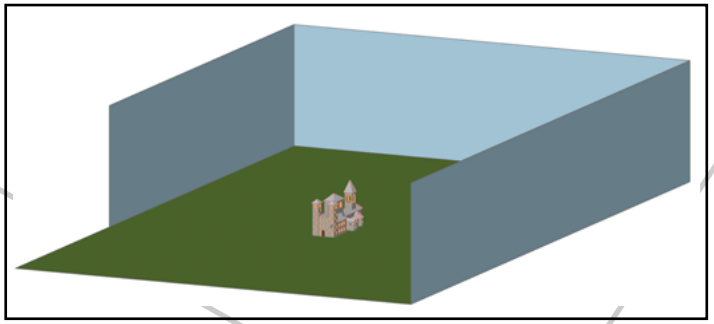
Adding Roofs and Windows



Once the walls were done I then went to work on adding a roof to the building. I mainly used the past recreations but they did differ from one another so I went off a combination of both. To add windows I stuck with one of the reference photo's and the pattern was that all of the windows were the same over the church but each recreation had a different style. I did have to adapt the style a little due to my skills with the software.

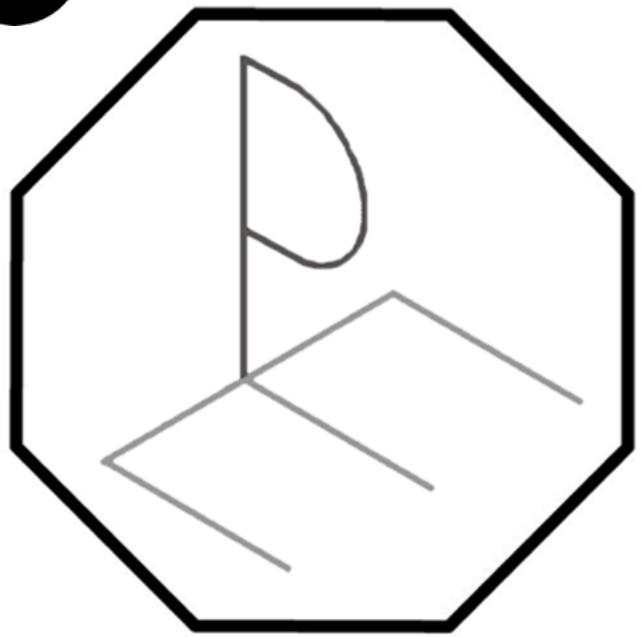
Preparing for Rendering

ArchiCAD comes with a method of rendering built into the software which I decided to use. To improve the render I built a quick environment around the model to stop it from appearing as if it was floating in midair. I also played around with adding trees and other elements but decided against it as it didn't look right.



Rendering

It took a couple of attempts to get the render looking right. It took a bit of playing around with camera angles and also with lighting and the environment I had created. On this page are some of the final renders that I came up with along with the one at the start of the project chapter.



Print-Ease

Business Plan

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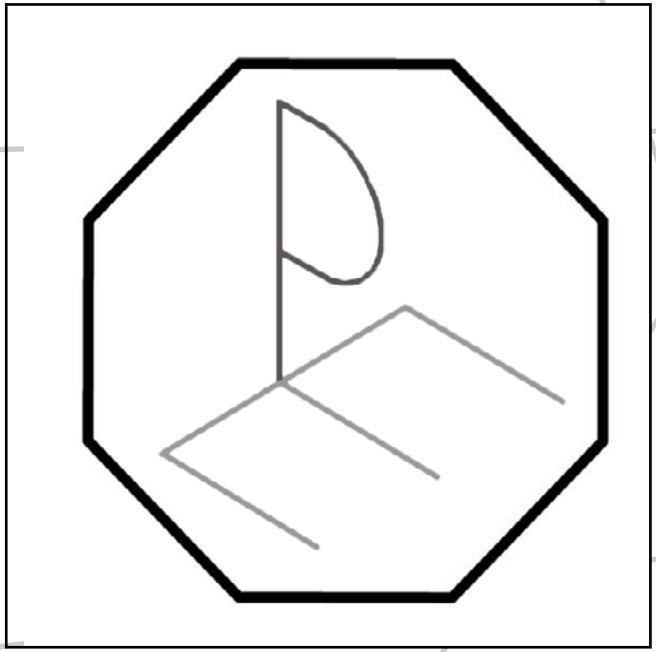


Project Overview

During my third and final year, I had to create a business idea and develop it into a full business plan. The idea that I came up with was to create a company that developed CAD drawings and offer a 3D printing service that is aimed more at individual people rather than mass-producing for large companies. For the business plan, I looked at competitors, costing, marketing, cash flow and more.

The full business plan is downloadable from my website portfolio. Just follow the QR code on the previous page and it will take you straight there.

Work Experience

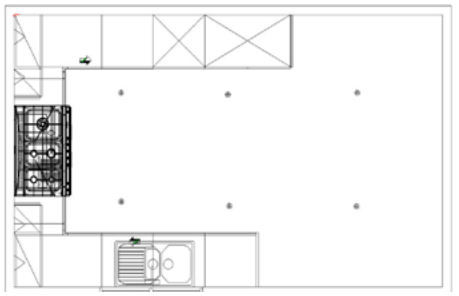
Throughout my 3rd year, I have been working at Wickes closely following and working with a kitchen and bathroom design consultant as a KBA (kitchen and bathroom advisor). In this role I was the first point of call for the customers, I was tasked with gathering the information and ideas from the customer and delivering it to the designer somewhat similar to a specification. As much as this is not my ideal area to do my work placement it is still extremely valuable as I have learnt to work with a range of different customers. I have also had a chance to use the design software. On the next page, you will see a collection of some examples of some of the work I have been doing.









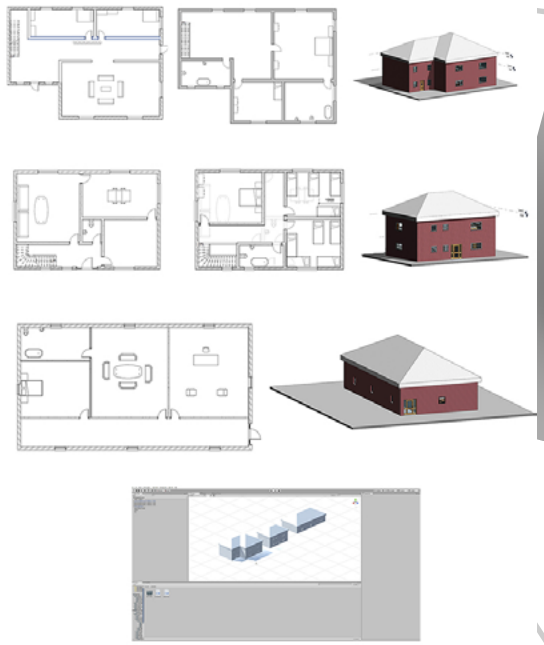


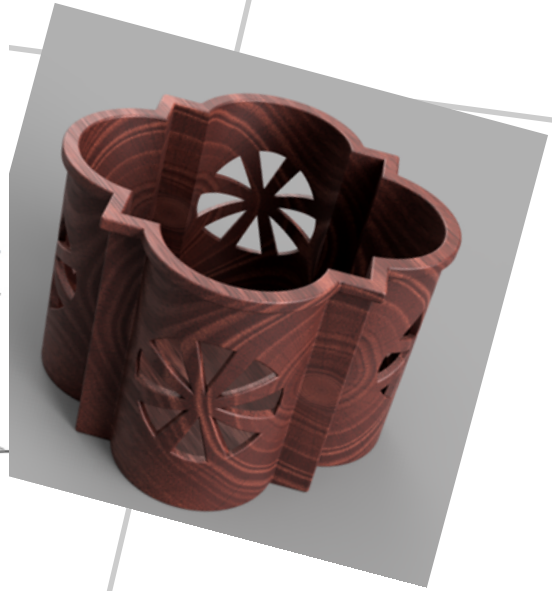
Other Projects

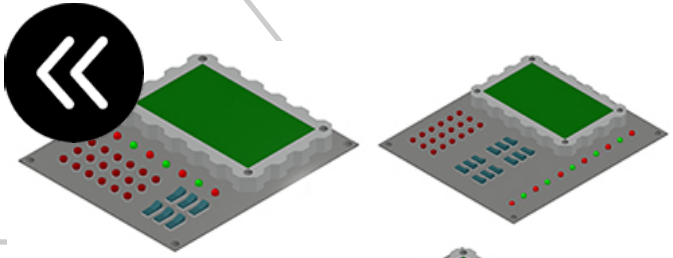
Overview

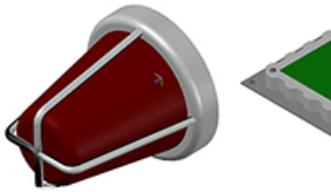
On this page and the next is a collection of images from other projects that I haven't gone over in this portfolio, more information on most of them can be found on my online portfolio.

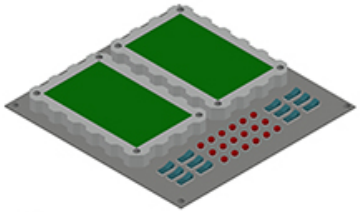
http://samlewis.winchesterdigital.co.uk/

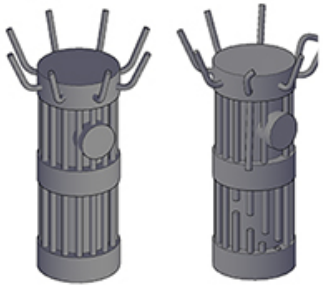










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Thank You For Your Attention

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or scan the QR code below.

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