

# DESI1212: Games Research Essay

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## Introduction

This report features two parts, part one being the research report and part two being the individual learning plan.

It analyses the requirements needed in my role (in this case being an environment artist) to be able to work in the games industry after I finish my studies and graduate; them being 2D/3D software choice, what companies are looking for in an employee, skills and knowledge, research into the creative field, portfolio creation, common mistakes that should be avoided and any legal/social/ethical issues to be considered. It also investigates my individual learning plan which contains the overview, roles and learning outcomes, mark breakdown and the milestone development.

## Essay Part I: Research Report

The specialist role I have chosen in this project is being the environment artist. I looked at this online magazine/article on ArtStation called “Everything You Need to Know to Become a Game Environment Artist”. It features the requirements needed to have ‘what it takes’ to pursue a career as an environment artist in the games industry, as well as tips and other useful information needed which are provided by Robert Hodri, a senior 3D environment artist who works for id Software, the game developer that is responsible for creating the Doom, Quake, Rage and Wolfenstein franchises. He’s worked on a few games such as DOOM, Crysis 2 & 3 and Wolfenstein II so he is very knowledgeable about the games industry.

The magazine main topics include:

- “How do I become a game environment artist?”
- “What do I need in my portfolio?”
- “What do hiring directors want to see?”
- “What is a typical day like for a gaming environment artist?”
- “What are common mistakes made by people in your line of work and how can I avoid them?”

### **I: “How do I become a game environment artist?”**

In this section, Robert talks about the different software that you need to use and familiarize yourself with when working on environments in the games industry, he mentions the game engines such as Unreal Engine, CryEngine and Unity and watching tutorials and applying what you learnt in those tutorials to your work. It’s essential that you watch a lot of tutorials due to the high learning curves of 3D software, especially if you are new to the field since there is a lot to learn when it comes to creating games. It’s beneficial to constantly practice using any software to be able to master it and create something that is of high quality and once you are more familiar with the game engine(s) of your choice, it will allow to build and create more complex environment scenes in your game.

Aside from learning game engine(s), you also need to have a good understanding of 3D modelling software such as ZBrush, Maya, 3ds Max and more. These packages all pros and cons so it is important to choose the right modelling package to use and you should consider multiple factors when choosing 3D software such as which package(s) are being used in the industry, which one suits your needs (e.g. better UI, accessibility, compatibility, etc.). Another software you should learn is Substance Painter/Designer and Photoshop for creating your textures and materials to be able to add even more detail to your models.

He also says that posting your portfolio online is good to gain exposure and potentially gain the attention of companies that are hiring, especially if you are a budding artist as some artists get their first job by simply posting their work online and being noticed and then hired by companies.

## II: "What do I need in my portfolio?"

Something that an environment artist's portfolio should show is being able to create a high poly mesh and bake them down on a low poly model. Environments can get very large so aside from showing the whole scene, it would also be good to show a few highly detailed assets that were used in that environment scene such as trees, rocks, tables, vehicles, etc.

Your portfolio should showcase your abilities and show that you are able to perform all the tasks needed to become an environment artist such as being able to create your own models, textures, lighting, compositions and more. Creating your own concept art would also be helpful since it's easier to make changes to the scene if it's on paper than a 3D environment during the early stages of your project, but although this is useful to have, it isn't necessarily needed since in the industry, you'll end up having to work with a 2D concept artist who would be focusing on concept art for you to recreate in 3D.

It is also important to have your contact information available on your portfolio so that it would be easy for companies to contact you. Using websites such as ArtStation [AS] is one of the best ones when creating an online portfolio since not everyone is a website designer and AS is easy to access and has high activity from all types of artists, be it beginners, freelancers, experts, etc. as well as video games companies and other companies looking to hire artists.

## III: "What do hiring directors want to see?"

It is important to have artwork that is easily accessible and clearly shown on your portfolio, but make sure that when uploading pre-production images of your project that you don't upload too many progress pictures as it may give the wrong signal and tell companies that you are unable to finish tasks on time for deadlines. If you don't have any experience in the industry, your resume should be simple and be kept to one page if possible.

Demo reels are not needed for environment artists as they take too much time to create and get outdated fast. All that is needed are high quality screenshots of your props and any assets you have created for your environment, but make sure to cover multiple angles and provide high quality renders with good lighting to impress.

Having breakdowns of your high poly assets, low poly and final meshes would also be good to show in your portfolio as well as any wireframes and texture flats - anything to showcase your workflow and progression to create your final product.

#### **IV: “What is a typical day like for a gaming environment artist?”**

Robert says that the typical day of an environment artist would depend on their position in the company (junior/mid-level/senior), the team size and the status of the project you’re working on.

The senior artists get to work more on more important assets and take care of multiplayer/single player levels. Being a senior artist also means that you must manage and organise a lot of people and a lot of work in the creation process.

During the early stages of a project, environment artists spend their time blocking out levels, creating first materials and creating a playable state of the game to see which elements work and what doesn’t. After the early stage, you create more detailed and more polished models for your game and fixing any bugs that you spot as well as optimizing your game so that it runs smoothly on different devices.

#### **V: “What are common mistakes made by people in your line of work and how can I avoid them?”**

According to Robert, the biggest mistake that environment artists do is that they ignore feedback from other people. Artists need to keep an open mind when creating assets, especially when working in a group with other artists as games need to have a consistent art style and to achieve that consistent art style, constant communication and feedback between artists is important. Getting external feedback from people who aren’t part of the project is also good because they will be able to provide a new set of eyes and have a new perspective on the project and possibly spot something that the original artists haven’t seen or give a new idea that artists would find useful and be able to use in their game.

Another mistake artists make is making a scene too ‘busy’ by creating too many little details which may cause the environment to become ‘unreadable’ to players. Artists need to focus on silhouettes and shapes and be careful when adding details to assets. A way to help improve your scene is to build the mood, atmosphere and lighting but while still making sure that you don’t add too much as it may ruin gameplay.

The game needs to undergo rigorous testing during the production period to check for bugs and make sure that all elements work in time for final release and to see what people think of their initial game and what aspects work and what don’t so that they would be able to make changes to improve player experience. During the final part of your project, you have to keep in mind performance; it is crucial to have a good understanding of the software used to create your main, especially the game engine as an unoptimized game will result in bad performance and low frame rates which would ruin the player’s experience and cause negative reactions from players.

## Other

I also looked at multiple job posts/openings from different companies online on job sites like glassdoor.co.uk and indeed.co.uk as well as job openings directly on the company's website (mainly Blizzard's page) and they had fairly similar requirements when hiring environment artists such as good 3D software knowledge, being able to work in a team of other artists, experience in the field, good composition and more.

## Social, Legal and Ethical Issues

When creating your assets for your game environment there are also other things that you should consider aside from the creative aspect of it, which are the social, legal and ethical issues. The main thing you should keep in mind are copyright laws, you have to ensure that everything you create is original and is your own work and if you do use someone else's work such as assets or sound effects, you must ensure that you are legally allowed to use them and gain permission from the owner to use them in your game.

Another thing to keep in mind when creating assets for your game is to make sure that you don't incorporate any (external) company logos in your game environment e.g. creating a building and putting the Starbucks logo on it or creating a character that looks too similar to someone without their permission in case you accidentally give them a bad image as they might file a lawsuit for something like defamation even if you did not intend that, which may cause negative attention towards you or the company you work for [see: Lindsay Lohan's (lost) lawsuit against Rockstar's game Grand Theft Auto V for allegedly creating a character based on her without her permission].

## Research Application

Everything that I have researched about the games industry and the requirements they ask for when applying as a 3D environment artist will be very helpful when working on this VR game project as well as my future after I graduate.

Although all the information I have researched will be useful, there are some that stand out from the rest and will mainly be keeping those in mind when working on our VR game and those include creating high quality models, but ensuring that the high poly models are baked onto low poly models so that it doesn't affect performance by polishing and optimizing them, creating a greybox to be able to test the environment during the early stages of our project which we are currently in, watch more tutorials and familiarise myself more with the game engine we are working on (Unity), ensure that there is constant communication between me and my fellow artists, especially Laurence (2<sup>nd</sup> environment artist) and Maria (working on textures) to ensure that we have a consistent art style and get external feedback from the rest of the class to see what areas we could improve on.

## Essay Part II: Individual Learning Plan

### Overview

After I graduate, I mainly want to work on creating 3D models, so for this project, the primary role I wanted was one that entailed modelling. I chose to become one of the

environment artists along with Laurence and will be working closely with both him and Maria, who wanted to focus on the textures. Due to there being more than one artist working on the environment, we must ensure that we have a consistent art style throughout all our assets in the game.

I will be concentrating on modelling the interior design of the house, so assets such as walls, doors, windows, stairs, etc. I will also be creating some props for our main characters for him to use as weapons in our game. Doing this would require detailed research on different houses of different locations and periods (the current plan is to have a dilapidated house set in Southern US in the 90's) in order to get the right look and capture the right atmosphere our game needs.

The software I will be using in this project will be 3ds Max for hard surface modelling, such as the weaponry, walls, stairs, doors and other parts of the house. I will also be using ZBrush for more organic models and give them smoother shapes such as any foliage like leaves/bushes/tree roots that may have developed in the house to give it a more abandoned look. Finally, I will be creating my textures in Photoshop and unwrapping them in 3ds Max to add more detail to my models. *\*Since Maria wanted to focus on textures, I will only be creating textures if she has too great a workload and if she needs a helping hand.*

## Roles and Learning Outcomes

At the start of our project, when we first formed our group, we asked one another what roles we wanted to do and what our specialty was. I put mine as 3D modelling (either organic or hard-surface) and cinematics. Cem wanted to focus on character modelling and animation so I decided that I would take on the role of the environment artist since I wanted to focus solely on modelling but didn't mind whether it was characters or props or environment as long as it was modelling. I also haven't modelled any assets that were to be used in the environment but was familiar with setting up and building an environment thanks to our project in Unreal Engine last year where I used Epic Games' assets to create the environment of my game.

Since our game is a Virtual Reality game, Darren pointed out that there may not be any cinematics used in our game, so that makes my main and only role in the group as being the environment artist and create 3D models for props as well as the interior of the house.

However, I may not be creating the textures for my models because Maria wanted to focus on creating the textures herself, but we both agreed that if there is too much workload for her that I would help her with the texturing so if she asks for my help then I will gladly step in and create any missing textures for my assets.

Since our game is a VR game, I need to do some more research on the extra requirements that VR has as it's not the same as a normal game and I have to ensure that I meet the polygon count otherwise it will cause frame drops which would provide bad player experience as frames need to be at a minimum of 90.

Modelling a series of assets to be used in the environment would meet the 1<sup>st</sup>, 3<sup>rd</sup> and 6<sup>th</sup> learning objectives for DESI 1212.

By choosing to become the environment artist in this project, it widens my knowledge about 3D modelling as well as expanding my portfolio to include something new and opens another potential path for me to take after I graduate.

### Mark Breakdown

Since my only role is being the environment artist, I want to be marked purely for the 3D models of the assets that I create for the house. But if I end up creating some of my own textures along with Maria's textures, then perhaps the marks I get could be split up as 80:20; 80% of the credit will be based on my assets for the environment and 20% of it would be based on the textures.

### Milestone Development

My target for now is to work with the concept artist and create a blueprint of the house (by the end of the month) so that us environment artists have a rough idea about the size and layout of everything. Researching about American houses should be finished at around the same time as well – a good house to base ours on would be the house they used in Netflix's The Haunting of Hill House which is Bisham Manor located in Georgia, United States. I think it would be a good reference for our house because towards the end of the first season, when the family returned there it captured the abandoned look, yet at the same time was inhabited, by ghosts. The house was monotonous and clearly hasn't had maintenance for decades as the house was full of flora, which is similar to what I saw our game's environment as in my head.

Once the blueprint is done, I can rebuild the scene in Unity and create a prototype using greyboxing by the end of the year, just before Christmas break. Modelling should be complete by February 2019.

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