overview

This week is about getting an overview of the whole course, and discussing both the students relationship with digital media, as well as with museums.

The second part of the class will be focused on an introduction to Unity, the software we will be using for the whole semester.

summary

intro

augmented reality

museums

break

introduction to unity

outro

intro

https://pierredepaz.net
pierre's website
https://github.com/periode/augmenting-gallery
the class code and schedule website
https://periode.github.io/augmenting-gallery
the class notes
https://github.com/periode/digital-culture
the class website for digital culture at sciences po

augmenting the gallery

welcome!

Welcome to the first class of Augmenting the Gallery!

pierre

pierre depaz (pierre.depaz@nyu.edu)

-> teacher (nyu ny - nyu ad - nyu b - sciences po)

-> student (sorbonne - mit)

-> other (empathetic media, osf, code in museums)

I've started teaching game development and programming at the game center at NYU in new york, where I also worked at the Whitney Museum and the MoMA PS1.

After spending a couple of year at NYU Abu Dhabi, I'm now teaching this class in Berlin, along with a Fall class on digital sociology at a university in France. Finally, I'm a part-time doctoral student between the Sorbonne and MIT, working on the aesthetics of source code.

you

name? from? major? why this class?

bonus question: *overall, do you think computers make things better or worse?*

Spoiler: there are now wrong answers.

this class

code and schedule

course notes

a note about this software

a note about screens in class

This class is the second IMA Pathway course offered at NYU Berlin. As such, it allows IMA students from different campuses to meet one another, and collaborate in a new city.

Since there are no pre-requisites, students from other majors are also very welcomed, and contribute to a diversity of approaches and visions when it comes to designing information delivery in cultural contexts.

The two links you see above should be consulted frequently, to get the latest information on the code, the schedule and the course notes. The class notes are generated from multimodal, an ongoing research project on educational technology. Therefore, you shouldn't

need to take any notes digitally (feel free to do so on paper!).

One of the reasons for that is that taking notes on laptops inevitably lead to browsing the internet, and browsing the internet inevitably leads to the persons sitting next to you being distracted by what's happening on your screen, so please do not use laptops in class (outside of programming time), out of respect for your neighbour.

augmented reality

https://www.youtube.com/watch?v=wMsUs5nBS-4
Navigation in museum spaces

some augmented projects

artivive - egon schiele

various - hello we're from the internet

adrien M & claire B

border memorial

hyper-reality

Here is a variety of AR projects, ranging from completely speculative to completely practical. While they all demonstrate the possibilities and uses of AR, this class will focus on projects along the lines of the Egon Schiele augmented exhibition and the Border Memorial.

The first one provides a unique look at the paintings displayed, by making use of the existing museum and collection resources to offer deeper information about a given object.

The second one approaches not just the object, but the space in which the user stands, and the invisible stories that have happened, or might happen in that space -invisible stories that can be revealed in a more immediate fashion by AR.

the idea of augmenting

what does "augmenting" mean?

- no more physical world / - no more interacting with others - difficult to live in a scenario where there are too many choices - if it was something other than advertisements? - malfunction? how dependent on external systems - cognitive difficulty

- pleasantness of animations - access of "relevant" information - positive surveillance (crime rates can decrease)

- what if AR went the same way as mobile development? - potential worlds?

The word augmenting ties back to two main trends:

- *the first is the idea that there are things that are invisible, either information or possibilities of action, and which can be revealed to allow us more meaningful knowledge and interaction with those things. This is centered on **the objects and spaces** first.*

- *the second is the idea that technology is overall a set of technical apparatuses which improves the agency and abilities of humans. This is focused on **the people** first.*

This is not to say that the two are mutually exclusive, as they feed into each other, but they do influence the design process of technology, and will influence your design process as you start developing your own applications.

augmenting apps

what apps do you use the most?

how do they augment (your) reality?

As the media theorist Marshall McLuhan and computer scientist Joseph Weizenbaum have respectively said, media are extensions of man, and tools are projections of ourselves.

The apps we use in our everyday lives have a particular impact on how we interact with the world and with society. Since no technology is intrinsically good or bad, we can rather think about what the uses of those apps are: when are they helpful? to whom? when are they not? what are the tradeoffs?

the case of maps

how does google maps change the world?

good parts - the directness of the route, least amount of time (efficiency) - you don't need a physical map - save a lot of time - you don't have to be aware of your surroundings - punctuality - traffic, inconveniences, live updates - less food poisoning

bad parts - not being aware (vulnerable to getting lost) - dependent

on the app (path dependency) - there's less agency - you're sharing your location on the CLOUD - doesn't eliminate language barriers - removes socializing - reading reviews - synchronization issues

AR vs. VR

augmented reality and virtual reality live on the same spectrum

reality <----------> virtuality

OCULUS

HOLOLENS

AR KIT

You might have heard the terms XR and MR a lot these days. They are both acronyms which refer to both Augmented Reality (AR) and Virtual Reality (VR). However similar these two technologies might seem, they exist on the very opposites of a spectrum.

VR and AR do share development workflow (AR and VR apps can usually be made with the same tools and programming languages), but they require drastically different design thiking. AR is about starting from the physical world and integrating the digital into it, while VR is about starting from the digital world (i.e. nothing) and rebuilding the physical world inside it.

This class is only going to focus on AR.

broad questions

-> what do we make visible? what do we make invisible?

-> how do we make it accessible?

-> what do we do to reality? and to ourselves?

To conclude our section introducting AR and digital applications, here are some broad questions that will guide our exploration of this medium throughout the semester.

- *Augmented Reality is about **revealing information**. This revealing of information always implies an abstraction: choosing to show thing A instead of thing B because you think it's important to focus on A. These choices need to be deliberate and thoughtful, taking into account what you want to do, and who you're doing it to.*

- *Augmented Reality is about **opening up possibilities**. With an interactive media, you're letting your users do things that they couldn't do before. What is it that you want them to be able to do, and what is the "best" way to do so? This question relates closely to UI and UX design.*

- *Augmented Reality is about reality. By changing how we perceive reality, we also change how we perceive the world, and therefore ourselves. Each technology does that, and particularly information-processing technology, so there's no point in resisting it, but I believe it's important not to think in terms of hierarchies (more is always better), but rather in terms of what each of them give us and what each of them take from us.*

museums

Now that we've talked one component of the class, digital media, let's turn to the other one: the museum.

We'll go over broad thoughts about what a museum is, how it is different from a gallery, and how we're going to be working with museums throughout the semester.

museums and galleries

why do you go to museums? to galleries?

- to see beautiful artworks, out of daily lifestyle - understanding why the city/country is the way it is - learning more about different cultures - it's fun - sometimes intellectually stimulating - interesting to see how they waste so much space - how the city sees itself

- how the museum or the country sees the world - egyptian collection in the neues museum (hierarchy) - curatorial intent (reframe) - picasso (art) vs. mask (artefact) - everything is a choice

(what we think is important) - biennials

going to galleries: - more specific, contemporary - galleries are less politically charged and more monetary - still reflecting life/the world/the taste of the time - museums have standards / galleries have more specificity - depends on the artist (political or not) - SELLING ART

1. MONEY 2. TRUTH (objectivity vs. subjectivity

We sometimes go to museums to learn about the history of a country, or of a trade, or of a theme. We can also go for temporary exhibitions or events. We can even go to get a coffee or a meal. Museums are, as some would say today, "platforms", they enable multiple kinds of activities through the layout of their infrastructure.

Reflecting upon why you go, and what you do in a museum is a good starting point when designing an application in the context of a museum. However, it shouldn't be the only perspective you think from. What about the team that works at a museum? What is their vision? What about a elementary school class visit? Why do they come? What about someone who's never been to a museum? Why would they want to come?

augmenting a museum

so what is a museum?

how would we augment it?

Museums are cultural institutions, perhaps one of the most important cultural institutions in the western world. They have multiple roles: they display, preserve, educate, and connect. How they do each of these things, and how well they do it -that is up for debate.

*There are two big differences museums and galleries: **money**, and **time**. Objects in a gallery are for sale, while objects in a museum aren't, and galleries mostyl deal with the present (what is being done), while museums mostly deal with the past (what has been done).*

Galleries can also take multiple forms and shapes, like pop-up galleries, studio galleries, university galleries. They focus on the display of art works, while museums focus on the display of cultural works.

(And this class should definitely be called "Augmenting the Museum", I'm not entirely sure why we went for "Augmenting the Gallery"...)

three approaches

-> spaces

-> objects

-> people

As we've started discussing with AR, there are three big approaches we can take to augmenting a situation: looking at spaces, objects and people. While each of these exist in any given situation, museums are a specific configuration of this triad.

- *Museum **spaces** include navigation, locations, architecture, historical sites, surrounding areas, ...*

- *Museum **objects** include the collection on display, the collection not on, display fixtures, temporary installations, ...*

- *Museum **people** include the visitors (whether onsite or offsite), the museum staff, the surrounding residents, ...*

working with museums

collaboration with M4P0

museum4punkt0

Throughout the semester, we will be collaborating with the M4P0 organization. They are a think-tank funded by the German federal government whose task is to come up with concrete propositions to bring the variety of public museums in Germany up to speed with digital technologies.

You will chose a particular use-case that they've prepared for us, and design and develop a solution for it. Depending on the brief, the work might be more development-focused, or more design-focus.

In any case, during the final presentations, you should hand out both a design document and an AR prototype. The first visit to the M4P0 offices will be on March 11th (see the schedule for more details).

break

break?

break!

(10 min)

introduction to unity

unity

originally a game engine

now an everything engine

concepts

we are going to go over three things today:

-> interface

-> gameobject

-> scripting

components OBJECT -
COMPONENT - -
VALUES - COMPONENT
- - VALUES (Vector3) - -
VALUES

Essentially:

- *interfaces are:* ***how do I do something***
- *gameobjects are:* ***what do i want to see***
- *scripts are:* ***how do i make objects do something***

For the first couple of weeks, we will be doing exercises which will allow you to cover these skills over and over again (interface, gameobject, script), introducing small new aspects everytime.

exercise

-> make an object change color

-> make a text change content

outro

recap

-> the concept of *augmenting* isn't uni-dimensional

-> AR can augment affect **spaces**, **objects**, **people**

-> museums are weird

-> it's important to get a good grasp of unity

next week

look at the schedule

- setup a blog and send me your github username
- do the readings (about the past dreams of future technology)
- do the first assignment (about an object's story)

we will talk more deeply about technology and augmentation