

Animação e Ambientes Virtuais

2022/2023

Mestrado em Engenharia Informática

Mestrado em Informática

Pós-graduação

Method 1

Two alternative topics

Deadline for submission of the report and files (Blender and video): 12 June 2023

- **This work is done in groups of 2 or 3 students (group enrolment in the webpage)**
 - **Each group chooses just one of the two proposed topics.**
 - The report and files (Blender and video files) are delivered through the course page on moodle. Alternatively, the report may provide a link to a shared repository that contains the files.
 - The report can be written in Portuguese or English and must clearly explain the contribution of each element of the group to the work carried out. It must contain the complete list of all references consulted (articles, books, web pages and others).
 - The quality of the report will be taken into account in the final grade assigned to each work.
 - The work will be discussed during the months of June and July, on a date to be announced and previously scheduled with the groups.
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Topic 1- Roman Theater of Lisbon

There are several examples of virtual recreation of ancient historical environments. In Portugal, the remains of the Roman Period are particularly relevant and numerous, with some recreations of this period being highlighted, such as: Roman Lisbon and Ammaia.

In this work we intend to create a virtual visit to the Roman Theater of Lisbon.

In the site of the Roman Theatre's Museum you can read the following:

“This site museum, which forms part of the Museum of Lisbon, is located in the historic quarter of the city. It reveals one of the most important monuments of the roman *Felicitas Iulia Olisipo*: the city's theatre, with visible structures dated from the 1st century AD.

In addition to the archaeological excavations, where visitors can see the broad foundation of the *proscenium* (the supporting wall of the scenic façade) and the *orchestra* (the area reserved for the city's elite), the Museum of Lisbon - Roman Theatre has a long-term exhibition area installed in two buildings from different periods.“

In this work, an animation of about 1 min is intended to show us a walk outside and inside the building, trying to recreate its appearance at the time of the Roman occupation. The relevant details can be consulted in the attached document: Theater_AAV_2023_ING.pdf.

Topic 2- The virtual coach of the VA|Prevention project

This proposal is part of the VAPREVENTION research project, whose brief description is "Randomised controlled trial and economic evaluation of a person-centred **digital intervention** to prevent diabetes in high-risk adults".

The digital intervention mentioned in the summary of the VAPREVENTION project comprises a **web app with a virtual human coach (VHC)** designed to simulate face-to-face behaviour change support to persons with high risk of Type 2 Diabetes (T2D).

The aim of this proposal is to develop a first prototype of this web app with a cartoonish 2D model of the coach already developed (see figure). The VH will talk (sound + articulation of the lips) and to accomplish these features some software tools have been identified and adopted in previous works. However, it will be valuable in this proposal to identify more modern solutions.



The complete model of the VH with several facial elements for the articulation of the speech will be provided.

The use of this model in a trial version of a previous project can be visualized [here](#).

The relevant details can be consulted in the attached document: Coach_AAV_2023_ING.pdf

This project, which involves a multidisciplinary team, officially started on 9 March 2023 and is funded by the [Foundation for Science and Technology](#) (FCT), the Portuguese public agency supporting research in science, technology and innovation in all areas of knowledge. A project in this topic will evolve to an MSc thesis with scholarship.
