Group 6

**Project Title**

Future Worlds

**Group Members**

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**Motivation**

The project is based on the World3 Model produced in the 1970s by the Club of Rome.
It is a dynamic systems model that can be used to estimate the future of our planet.
The model features 5 main systems: Population, Pollution, Resources, Food Production, §and Industry.
Our motivation is to produce a videogame like experience the explores different possible worlds through generated audio and visuals that match the state of the planet, as described by the parameters modelled.
Our innovation into the pre-existing World3 Model is that we will provide the user a space to interact with, enabling a multi-sensory experience that aims to encourage the user to think about our planet's future.

**Project Concept**

Using Openframeworks, We will show the user a view of the planet earth from space, in the background the user will see simple models of the other planets in the solar system orbiting passed, Mars, Jupiter, etc.

The user will be able to select between a set number of premade worlds. Each world is a simulation of the earth from 1900 to 2100 made using the python project pyworld3.  Once a world is selected a timelapse will start spanning those 200 years. The texture of the earth will evolve over the years, using various generative scripts. For example, on a world where the pollution will increase to high levels, the ice caps will melt, showing this by turning the pixels from white to blue.

Offline, we will prepare a number of landscapes of the world. To create these images we will create text prompts based on the outputs of the world3 model. These prompts will then be fed to an image generator for example Stable Diffusion. Each image will have various labels associated with it.

The user will have the ability to click on areas of the world, this will display a pop up image of that "location". For example, if the user clicks on North America during a year post 2000 in on a planet where population is high, we will display the pre-generated image that contains these labels.
For audio we will send OSC messages to Ableton Live to control various synth & fx parameters, as well as launch foley clips.
Each image would be associated with foley sounds, these could be generated by an image/text  to audio model, or could be from a traditional foley sound library. When an area on the world is selected and an image of that location is displayed this will also trigger the associated audio clip in Ableton.