### **What does the project aim to do?**

The project aims to create an interactive, and educational visual novel on climate change, designed to help the user to understand what is climate change, and the physics behind it. What causes it, what impacts it, and how to negate or ‘fix’ it. The story allows the user to make decisions and see the consequences of different actions on the climate, fostering a hands-on learning experience that demonstrates the complexity of environmental issues in a controlled simulated environment.

### **How does the project work?**

The project was built using Ren’py, a python-based visual novel engine, the project integrates interactive storytelling with educational content. The game presents real-life scenarios where the user can make choices, read through each dialogues, and explore the visual elements that represent real-world data and scientific findings on climate change. Using this, the game shows the impact of the choices the user has on the environment, based on key climate science concepts.

### **What benefit does it bring?**

The project offers an interactive, visual approach that makes a complex topic like climate science accessible, engaging, and memorable. Compared to traditional lessons, this project can increase the user's interest and retention by allowing them to “experience” climate change scenarios and consider their own roles in environment conservation. It also promotes critical thinking,decision making, and problem-solving skills, as the user navigates the impact of various mitigation and adaptation strategies, which are essential in climate education as this could give them a whole new meaning to every small step they take.

### **What do the project hope to achieve?**

The project’s primary goal is to make climate science more approachable and meaningful for the user, fostering environmental awareness and empowering them to make more sustainable choices. By engaging them in an interactive story format, this project hopes to inspire future climate-conscious citizens who understand the importance of taking action against climate change. Moreover, the project also aims to show the educational value of Ren’py and digital storytelling in science education.

### **What tools, programming language, software and/or hardware did the team use to create the project?**

Tools: For asset creation the team have used canva, capcut, pixabay, and youtube music studio, some of the video also originates from youtube and the creator is appropriately credited in the project.

Programming Language: Python as the core language to built the project, used for scripting the story, adding branching dialogues, and programming interactive.

Software: The project used Ren’py, which is built on python and allows to build customizable visual novels.

Hardware: The development of the project is done on a personal laptop, with specifications capable of running the software, and any related assets creation tools.

### **What audience does the project aim to reach?**

The project is tailored for the general public, from highschool and all the way to college students who are starting to learn about climate change. The accessibility of the language and interactive elements are geared towards the younger generation, making it suitable as a supplementary educational tool in environmental science classes.

### **What makes the project unique?**

The integration of real-world scientific data and climate models provides an authentic learning experience. By simulating actual environmental choices and their impacts, the game goes beyond simple storytelling to create an immersive, and realistic educational experience that are backed by data.

### **What Challenge does it address?**

Understanding climate change can be overwhelming due to its complex nature. This project addresses the challenge by breaking down its scientific principles into relatable, interactive scenarios, thereby demystifying concepts like greenhouse gasses, global temperature rise, radiative forcing, climate sensitivity, and mitigation strategies.