

Meta-Earth

Immersive virtual reality visualization of the effects of climate change

Student: Lee Zhen Wei

Supervisor: Prof Seah Hock Soon

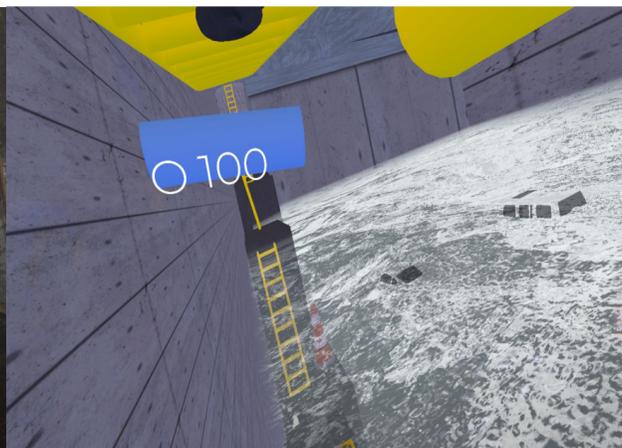


Project Objectives:

Meta-Earth is set in a fictional environment that simulates climate catastrophes that have occurred on Earth and climate catastrophes that could happen in the future if no significant action is taken to combat the effects of global warming. Meta-Earth places the player(user) at the centre of disastrous events caused by climate change using Virtual Reality (VR) technology. This allows users to have a better understanding of the effects of climate change to spur them to take actions towards reducing their carbon footprints. In order to better understand what lies ahead, should the climate be allowed to continue to deteriorate. The project competed in the Green Game Jam for Youth Competition and won the Merit Prize



The Australian Forest Fire world simulates the forest fires of outback Australia, home to koala bears and other wildlife such as the kookaburras, these forests contain eucalyptus trees that catch fire and spread fires rapidly. Animated wildlife patrol systems add life to the overall environment, particle effects and realistic fire propagation systems are implemented to better represent the intensity of the wildfires.



The Flooded Singapore Tunnel world challenges the player to escape a tunnel that is rapidly being flooded by an exceeding strong storm surge, with the water level rising rapidly, the user will face the visceral threat of drowning if he does not manage to get out in time. The level is designed around an innovative parkour mechanic that challenges the player to grab climbable objects to climb out.



The Melting Polar Ice Caps world showcases the tremendous effects of global warming at the north pole, the player is tasked to sail a boat and navigate around icebergs to learn more about the challenges and impact that rising global temperatures have on creatures at the north pole. Players may observe penguins in various scenarios struggling to survive as icebergs melt and shrink.