

MANGROVE CITY ELECTRONIC PRESS KIT



TITLE: MANGROVE CITY

YEAR: MVP 2023 / Full Version 2024

PROMO VIDEO:

https://www.youtube.com/watch?v=a2vg9tcz_kc (2:00)

SAMPLE PLAY VIDEO:

<https://www.youtube.com/watch?v=k-C6qXuo12g> (8:30)

WEBSITE:

www.mangrovecity.org

PRODUCERS/DIRECTORS:

Kim Grinfeder, Zeven Rodriguez, Ruth Ron, Rafael Araujo

CONTACT:

Kim Grinfeder

grinfeder@miami.edu

+1(786)553-5392

Short Synopsis

"Mangrove City" is an innovative VR educational experience designed to immerse players in the endangered world of mangrove ecosystems. Through interactive gameplay, it educates users about the ecological importance of mangroves and their role in climate resilience, fostering a deeper understanding of environmental stewardship. This award-winning project uniquely blends immersive learning with environmental awareness, aiming to inspire a new generation of environmental advocates.

Synopsis

"Mangrove City" is a pioneering virtual reality (VR) project from the University of Miami, crafted to immerse players in the rich ecosystem of mangroves. The experience combines technology and gameplay to educate about mangroves' ecological significance, focusing on their biology, biodiversity, and role in climate change mitigation.

The game, designed as an educational tool, allows players to explore mangrove environments, engage in activities like paddleboarding, identify bird species, and learn to recognize different mangrove types. It highlights the challenges mangroves face due to human impact and climate change, emphasizing the necessity of conservation efforts. Notably, "Mangrove City" is accompanied by a science-based classroom curriculum, making it an invaluable resource for educators seeking to integrate interactive learning with environmental education.

This VR experience has gained recognition, winning awards for its innovative approach to merging technology with environmental stewardship. By providing an immersive learning platform, "Mangrove City" aims to inspire environmental advocacy in players, encouraging a new generation to value and protect these vital ecosystems.

Full Synopsis

"Mangrove City" is an immersive virtual reality (VR) experience that transports you into the world of mangrove ecosystems. The game creates an interactive and engaging learning environment, focusing on the ecological, biological, and conservation aspects of mangroves.

In "Mangrove City," players embark on a virtual journey through various sections designed to enhance their understanding of mangroves. The journey begins on a scenic route of mangroves to educate about the role of mangroves in climate resilience. En route, immersive videos delve

into the heart of mangrove habitats, experiencing the ecosystem's intricacies firsthand. The "Bird Sounds" and "Mangrove ID" stations engage players in interactive games, enhancing their knowledge of the wildlife and plant species unique to mangrove environments.

"Mangrove City" also includes interactive sections on "Zonation" and "Coastal Erosion," where players learn about the geographical distribution of mangroves and their crucial role in coastal protection. The "Underwater Mangrove Communities" section provides a spectacular view of the aquatic life thriving among mangrove roots, emphasizing the biodiversity supported by these ecosystems.

Accompanying the game is a comprehensive, science-based classroom curriculum designed to align with Next Generation Science Standards (NGSS). This curriculum provides educators with a framework to integrate "Mangrove City" into their teaching, offering lesson plans, interactive activities, and assessment tools. The curriculum covers topics such as ecosystems, biodiversity, climate change, and environmental stewardship, making "Mangrove City" a versatile tool for both in-class learning and remote education settings.

"Mangrove City" not only serves as an engaging educational game but also as a platform for fostering environmental awareness and stewardship among students. By merging cutting-edge VR technology with an interactive learning approach, the game aims to inspire a new generation of environmentally conscious individuals equipped with a deeper understanding and appreciation of mangrove ecosystems and their importance in our world.

Team

Producers

Kim Grinfeder, Professor, University of Miami School of Communication
Zeven Rodriguez, Lecturer, University of Miami School of Communication
Ruth Ron, Lecturer, University of Miami School of Architecture
Rafael Araujo, Sr. Research Associate, University of Miami Rosenstiel School of Marine and Atmospheric Sciences

Education Lead

Ren Mendoza, Assistant Professor of STEM Education, University of Nebraska Omaha, College of Education, Health, and Human Sciences

Development Leads

Bryson Rudolph, Software Engineer, Frost Institute for Data Science and Computing
Zeven Rodriguez, Lecturer, Department of Interactive Media

Project Managers

Sofia Perez-Baux

Rachael Farinas

Developers

Ashay Dave, Graduate Student at the University of Miami
Sourav Pande, Graduate Student at the University of Miami
Kumani Riley, Student at the University of Miami
Bradley Karmin, Student at Northeastern University

Designers

Kim Grinfeder, Professor, Department of Interactive Media
Cassandra Swilley, Student at the University of Miami
Whit Redgate, Student at the University of Miami

Voiceover

Andrea Miranda

Architecture Design

Ruth Ron, Lecturer, University of Miami School of Architecture
Daley Hall & Sam Tsirulnikov - Lilypad Homes, Students at the University of Miami
Sean Festa & Nicholas Amadori – Beehives, Students at the University of Miami
Crispin Blamphin, Student at the University of Miami
Ckiara Condezo, Student at the University of Miami
Brianna Marie Frank, Student at the University of Miami

Mangrove Scientists

Rafael Araujo, Sr. Research Associate, Department of Marine Biology and Ecology
Kellie Flowers, Graduate Student at the University of Miami
Bailey Ross, Graduate Student at the University of Miami
Olivia Howson, Student at the University of Miami
Sana Lynch, Student at the University of Miami
Dale Kline, Student at the University of Miami
Maya Bhalla-Ladd, Student at the University of Miami
Kandisi Anyabwile, Student at the University of Miami

Press Release

Press Release: "Mangrove City" - A Virtual Reality Venture by the University of Miami to Foster Climate Change Awareness

Miami, FL – The University of Miami is excited about the launch of "Mangrove City," a groundbreaking virtual reality (VR) educational project aimed at raising awareness about the

significance of mangrove ecosystems and climate change. This immersive VR experience offers an engaging and interactive journey through the intricate world of mangroves, combining education with cutting-edge technology.

In "Mangrove City," players explore various aspects of mangrove biology, ecology, and conservation through activities like paddleboarding and bird sound identification, all within a virtual mangrove environment. The experience is enhanced by a comprehensive science-based curriculum aligned with Next Generation Science Standards (NGSS), providing valuable resources for educators to integrate this VR experience into their environmental science teachings.

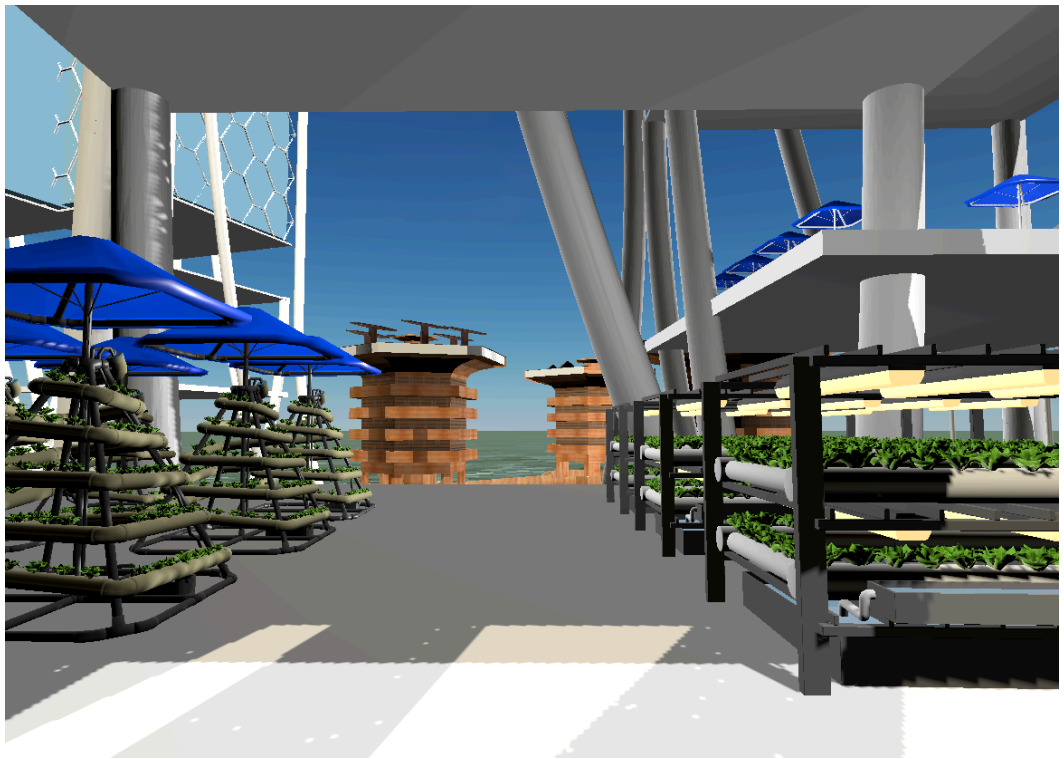
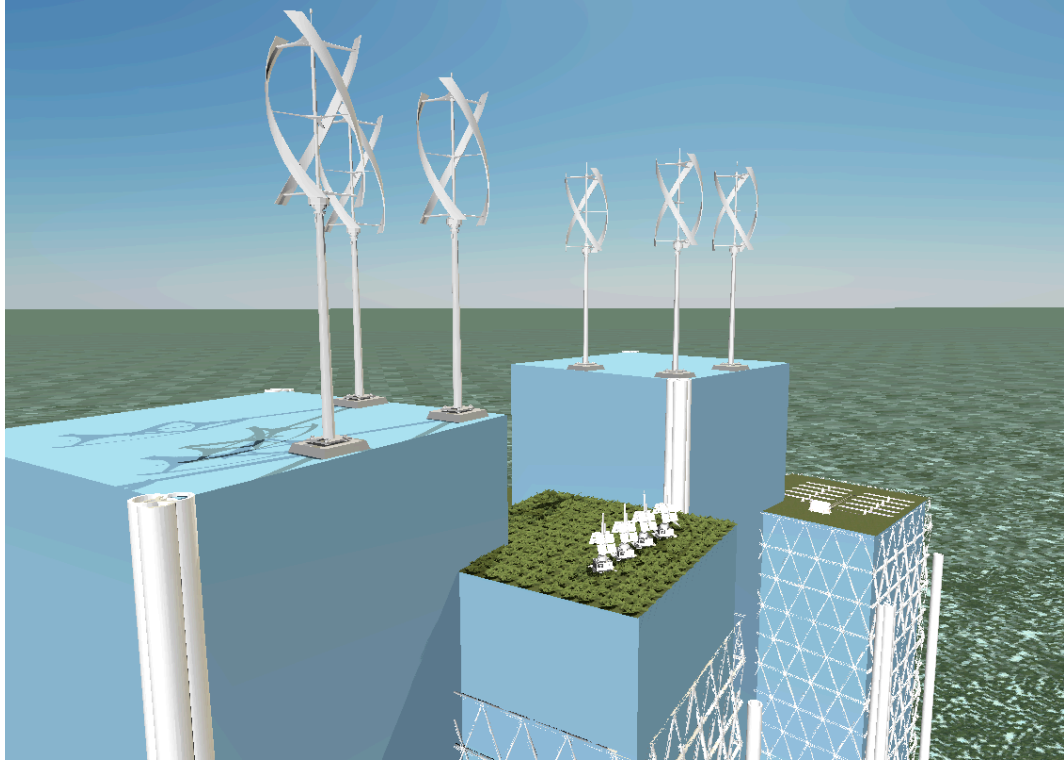
"Mangrove City" represents a significant step in utilizing VR as a tool for good, demonstrating its potential in environmental education and awareness. "Our main goal is to use the project to build awareness, so we see this as the beginning of a much longer path," said Grinfeder, emphasizing the project's broader objectives. This initiative showcases how VR can be a powerful medium in bringing attention to critical global issues like climate change and environmental conservation.

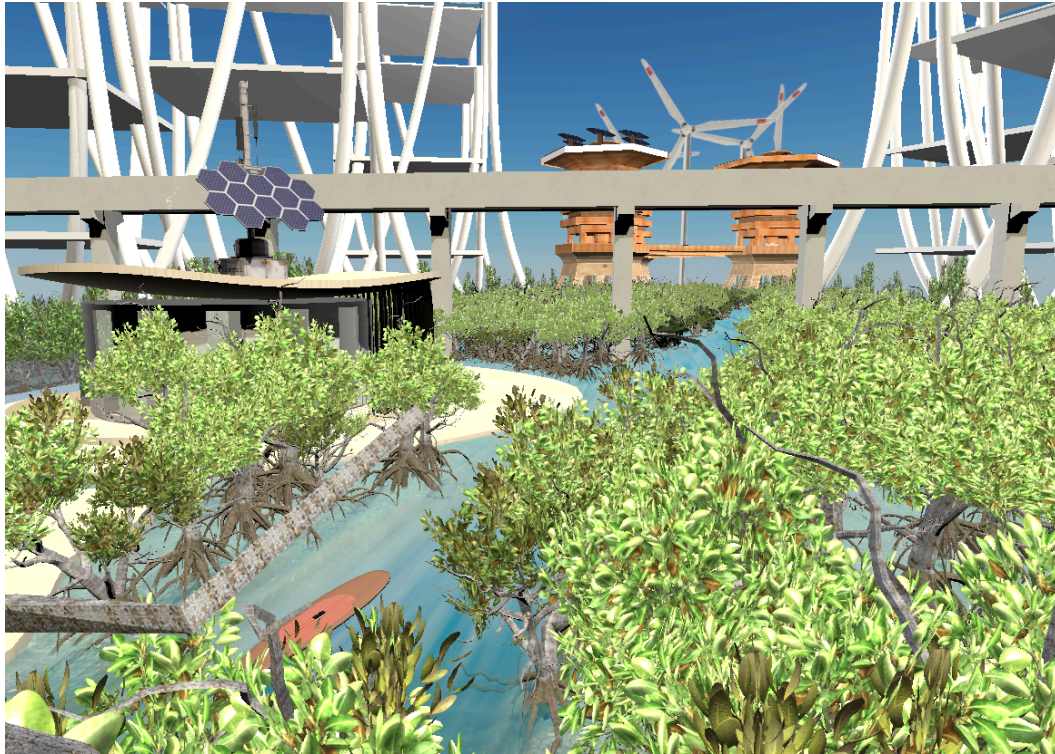
As an educational and engaging platform, "Mangrove City" is poised to transform how students and educators approach learning about our planet's vital ecosystems. It stands as a testament to the potential of VR to make a positive impact on environmental awareness and action.

For more information on "Mangrove City" and its educational implications, please visit www.mangrovecity.org

Photos









Interviews

Interview with Co-Producer Rafael Araujo (Mangrove Scientist/RSMAS)

What main idea do you want users to take away from Mangrove City?

I want them to understand the importance of mangrove ecosystems, their role in combating climate change, and nature's resilience in terms of adaptation and contribution to the health of our planet. Moreover, I want users to enjoy all aspects of the interactive experience, engage their senses, and be open to taking this immersive experience as a tool to learn and enjoy themselves.

What was your most memorable "making of" moment?

During the development phase, the goal was to discover innovative methods from my colleagues to engage audiences, especially children, effectively. The focus was on learning how to interact and elicit responses, exploring novel communication approaches, and inspiring people to develop a deeper appreciation for mangroves and nature. Personally, putting the VR set on and experiencing Mangrove City for the first time was incredible. I became a curious child once more.

How do projects like this one contribute to the Mangrove scientific community?

Mangrove City contributes to the mangrove scientific community by serving as a medium for the dissemination of research, fostering public understanding of scientific concepts, inspiring future scientists, and potentially fostering collaborations between different partners in the scientific and environmental sectors. It also opens up scientists to think “outside the box” and create innovative ways to engage the public, and in particular children, with what we do as scientists and how our lives are affected by nature.

Interview with Co-Producer Kim Grinfeder

How did this project come together?

One of my favorite activities in Miami is to paddle board through the mangroves, it’s a part of the city few people see, yet there’s so much we can learn from this ecosystem, especially in regards to climate change and sea level rise. I wanted to share this experience with my friends students but I knew it was a place that was not accessible to everyone, and VR is perfect for bringing people to inaccessible places.

What excites you about Mangrove City?

There is something everyone in Mangrove City: athletes, science nerds, engineers, and of all ages. It attracts people for different reasons, but the message that we need to protect mangroves and rethink cities is universal.

Why did you decide to build Mangrove City?

Globally, over 130 million people reside in cities where mangrove ecosystems are present. Considering various strategies to combat sea level rise, mangroves stand out as one of the most effective natural defenses that cities can utilize to safeguard against the impacts of rising seas. I want to demystify mangroves and teach future generations to build cities with nature in mind.

Interview with Co-Producer Ren Rende Mendoza (STEM Education Specialist/University of Nebraska Omaha)

How did this collaboration with technologists, scientists, and architects work when building a curriculum?

The project team worked collaboratively to iteratively design and develop the components of the VR experience and corresponding curriculum.

What is your favorite part of the curriculum?

My favorite part of the curriculum is the way that it has the capacity to extend the stand-alone VR experience into a multi-day unit where each lesson is aligned with the Next Generation Science Standards. I particularly like the engineering design challenge from the core curriculum.

What are you hoping teachers get from Mangrove City?

I hope that teachers are able to help build students' confidence and capacity for addressing issues related to climate change.

What was your most memorable "making of" moment?

My favorite "making of" moment was working with the team to identify the learning goals for each Mangrove City station.

Interview with Co-Producer Zeven Rodriguez (Technical Lead)

What parts of the app are you particularly proud of?

When we set out to build this project, we were unsure of the scale and how the project was going to come together. The collaboration with all of the different disciplines, students, faculty, and the hard work everyone has put forth has been inspiring, and I am grateful for all the work everyone has done!

What were some of the greatest challenges you faced when building the app?

The biggest challenge was trying to create the best-looking immersive environment possible while working through the limitations of the technology.

What was your most memorable "making of" moment?

We had a moment recently, where various things were not working and displaying. Working with students to collectively grind and figure out the puzzle pieces to get things working again and the ensuing high fives was a great feeling!

Interview with Co-Producer Ruth Ron (Architecture Lead)

Describe the process in the classroom for architecture students?

We learned about mangroves, circular economy, and how to 3d model specifically for VR. We met students from Marine Biology and Interactive Media and developed futuristic buildings that can adapt to rising waters, minimize resource consumption, grow food, and harvest renewable energy.

What was your most memorable "making of" moment?

When I saw that the projects of Mangrove City are becoming more beautiful and architecturally better than the AI images the students used as inspiration.

What can architecture students learn when building virtual buildings?

Architects and Architecture students work in 3D all the time, this is their medium of creation. The addition of VR to CAD and physical models means that students, teachers, and guests can meet inside the virtual buildings they develop, experiencing them spatially on a full-scale remotely.

What are your hopes for Mangrove City?

I hope Mangrove City will inspire young people to become innovators of the future. I hope it will open up their curiosity and imagination and send them on a mission to create better – sustainable, resilient, and beautiful cities.

What would you like to add to future versions of Mangrove City?

I would like to show the process of the design and tell the participants what we learned from mangroves and how we apply it to urban and residential design.

What were the main challenges when working on Mangrove City?

Keeping the file size small while maintaining the visual quality of the building high was a big learning process for all of us!