

Final presentation: Shadow scenes



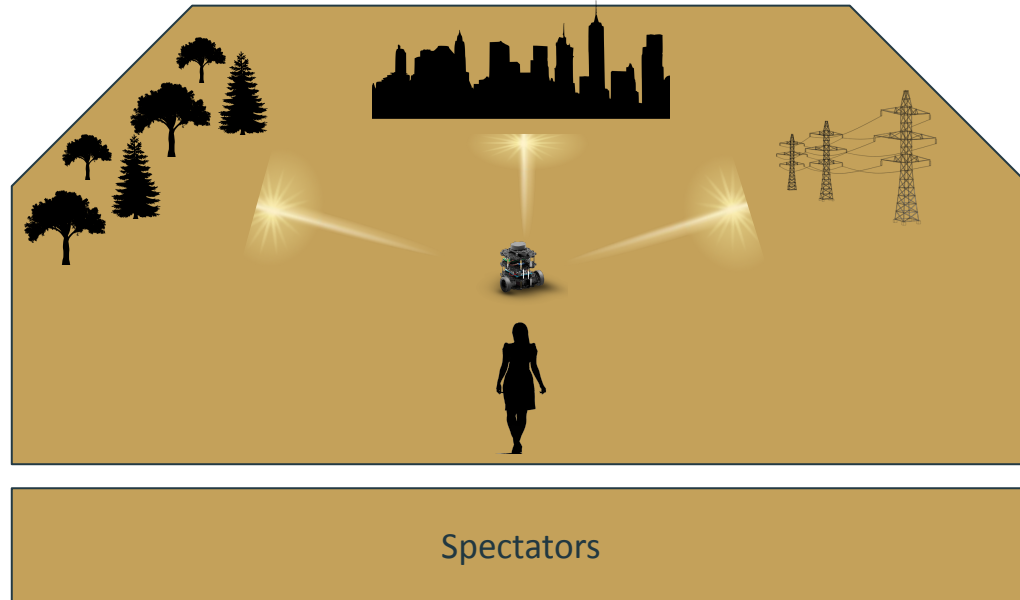
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Asier Yániz

Concept

Project a scene onto a background—as viewed through a train window—using rotating shadows.



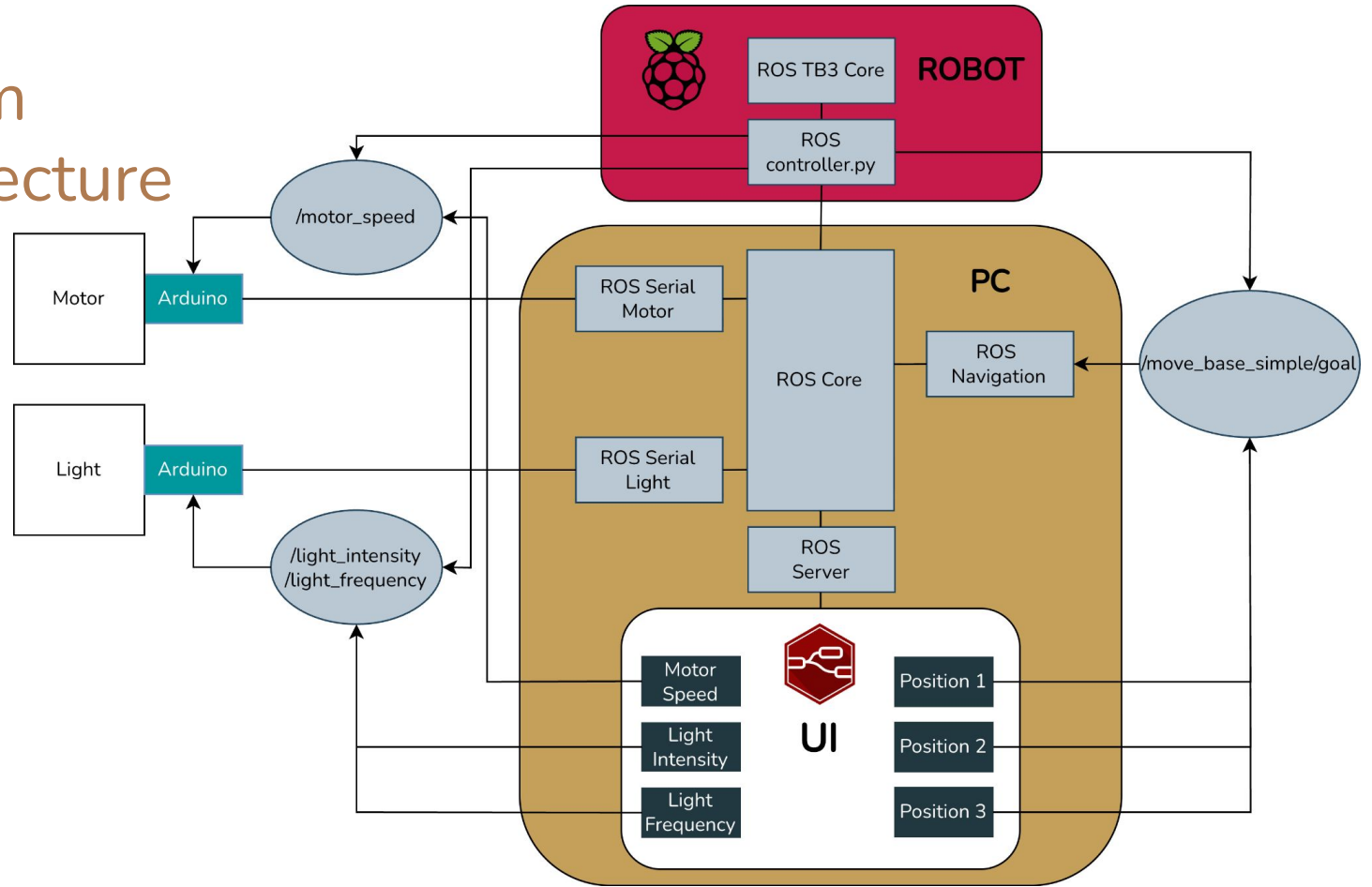
Stage distribution



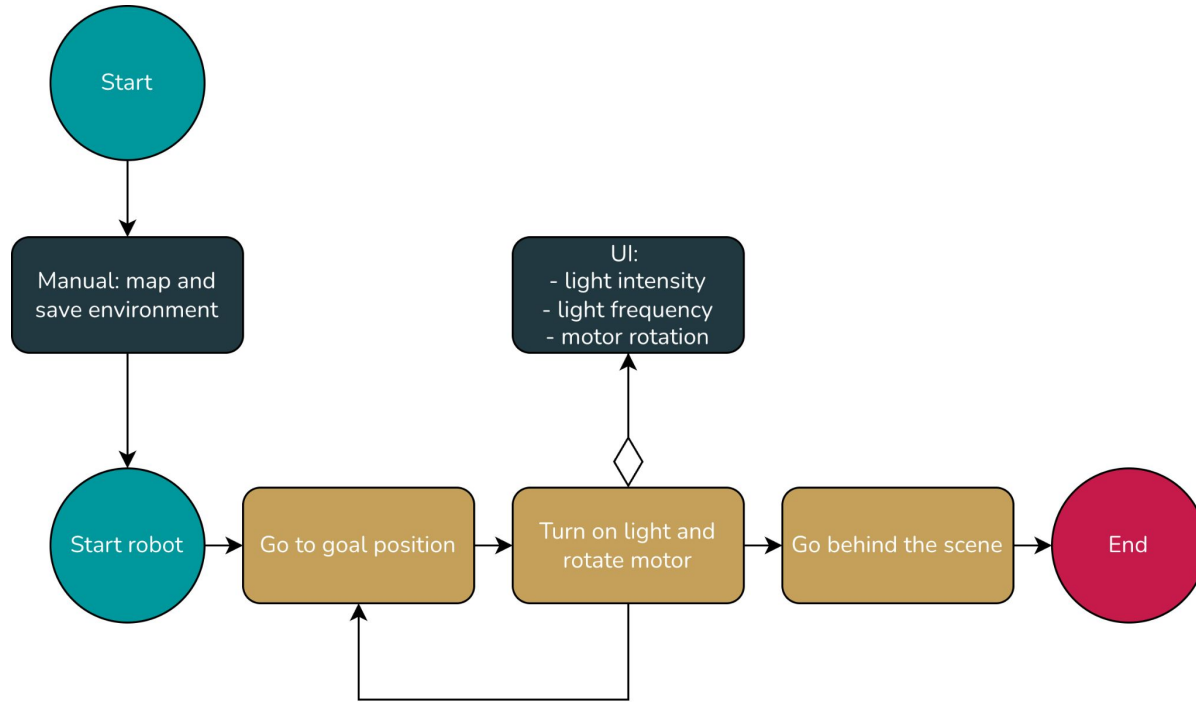


System Design

System Architecture



Robot flow



Interface

Robot Control

Movement

POSITION 3

POSITION 2

POSITION 1

Motor and Light Control

Motor velocity 

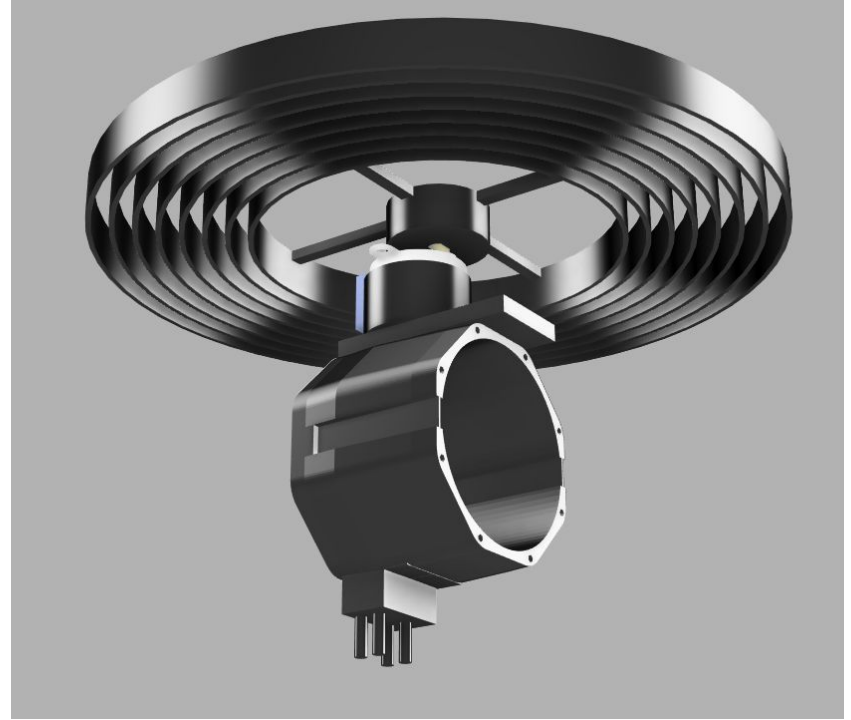
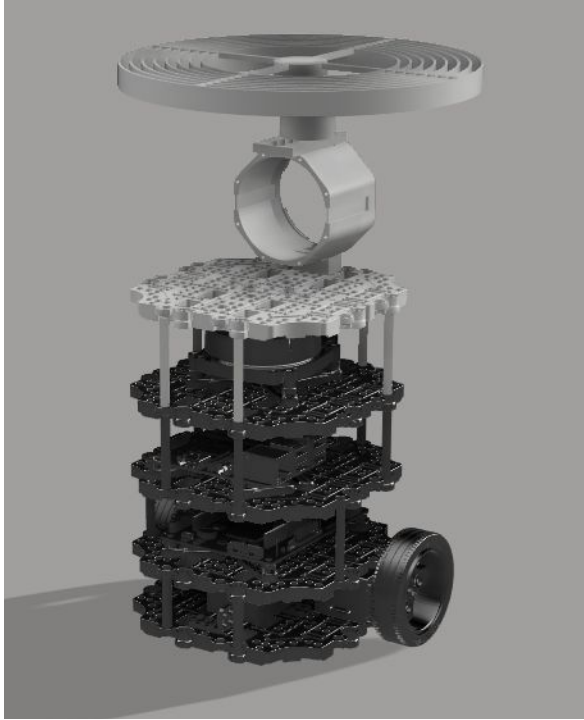
Light intensity 

Light frequency 

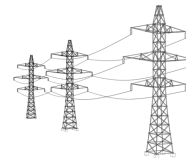
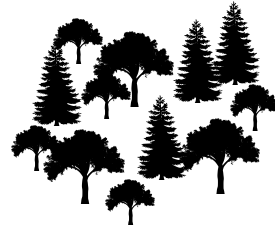
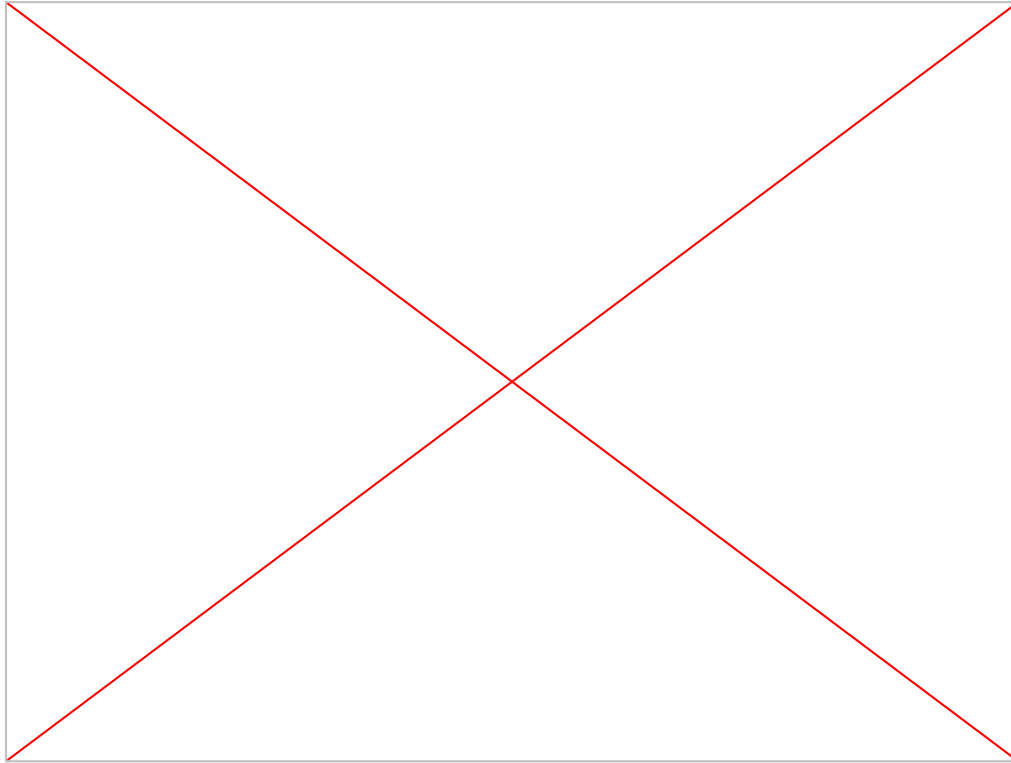


Hardware designs

Robot design



Landscape outline

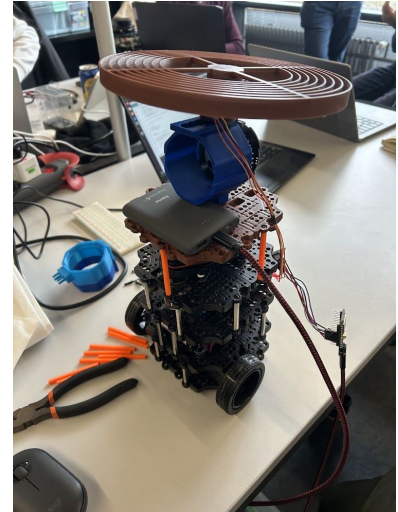
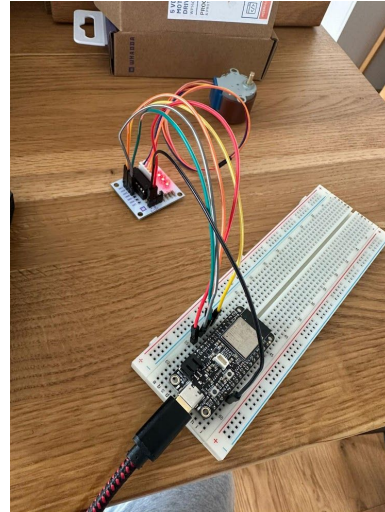
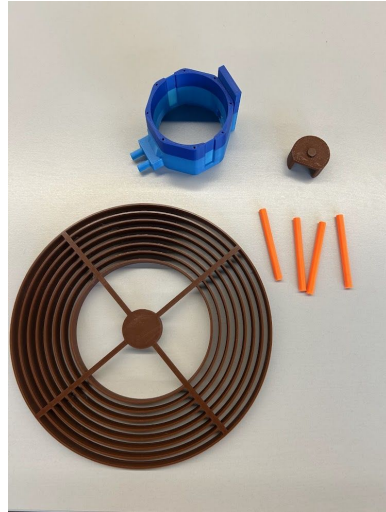
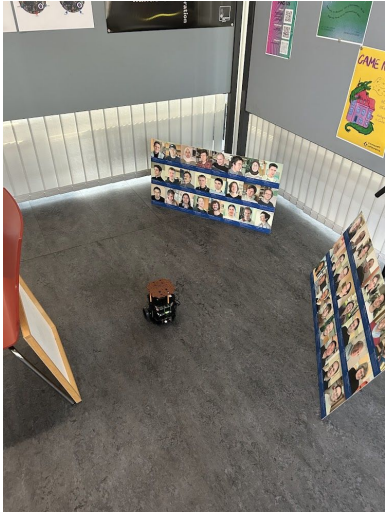




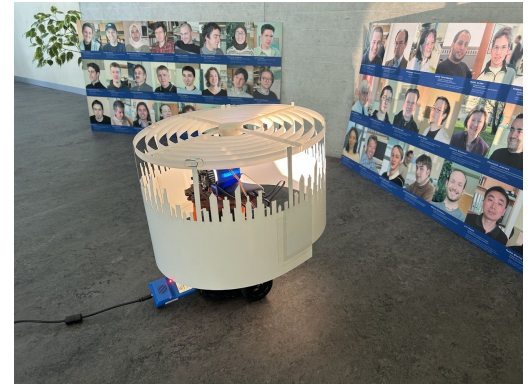
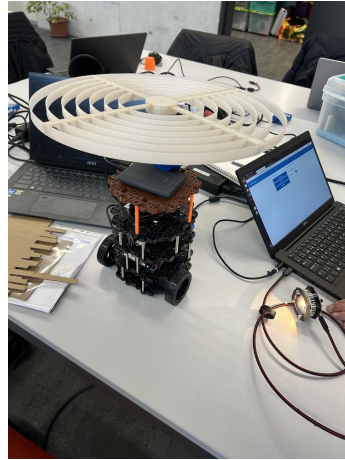
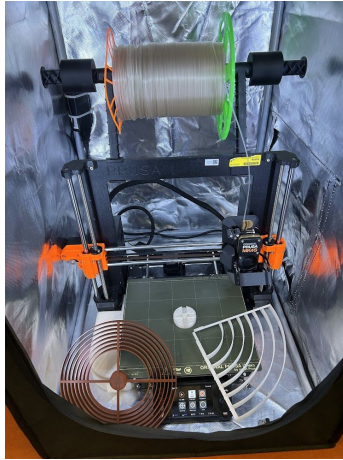
Process: fabrication,
assembly, and development



Process



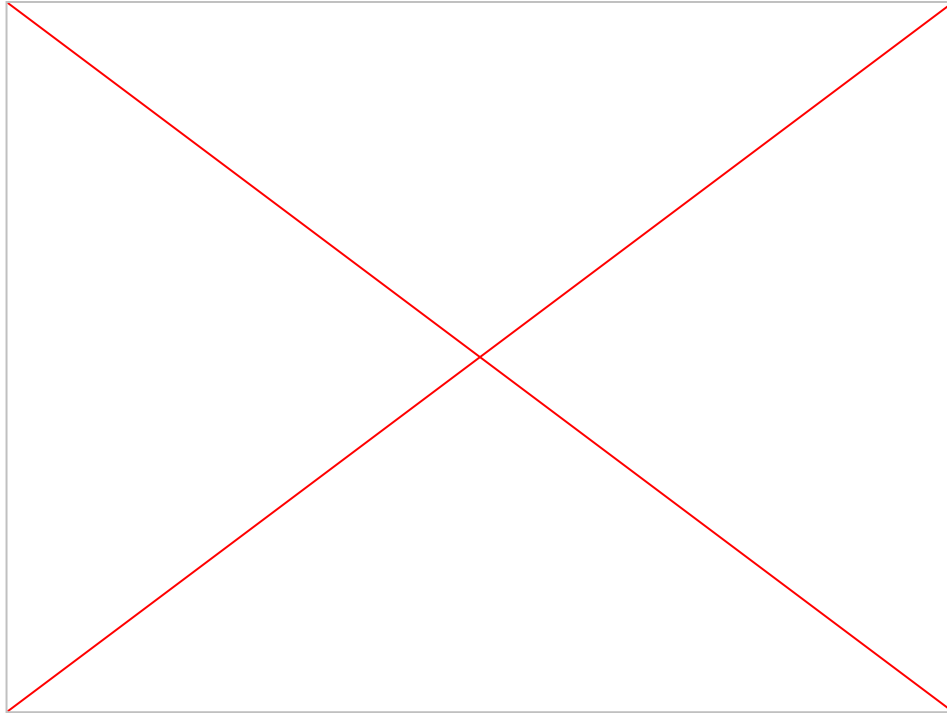
Process





Simulation

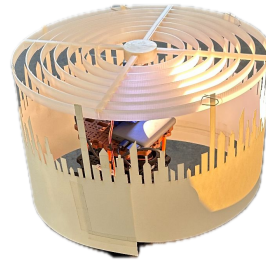
Demo



Challenges on the journey

Choosing the right pieces (e.g. motor)

Paper scene blocking the radar



Making the robot collaborate —> “let’s just restart everything”

Future Work

Project different scenes onto different backgrounds

Two concurrent scenes with parallax effect

Make the robot fully autonomous



Live Demo

Questions?

