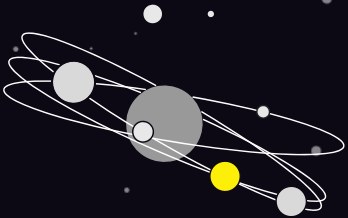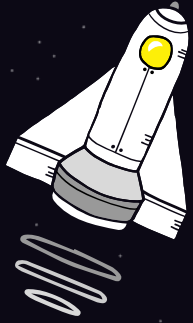# HCI 580

Hand Tracking Visualization

THE FIRST STEPS

Why this project?

I have never worked with a software based hand tracking and this seemed like a fun project to explore it's capabilities and try out something fun while learning.
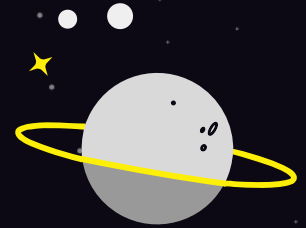
Tech Stack

SOFTWARE

- Unity

- AR Foundation Package

- Manomotion SDK

HARDWARE

- Android Phone API 7.0+

MOBILE APP

THIS IS FORCE LIGHTNING

FORCE LIGHTNING

Force lightning is a dark side ability used to torture, disfigure, and even kill one's victims. Blue in color, Sith shoot Force lightning from their hands by calling on their hatred and aggressive feelings. However, while a deadly weapon, it is not unstoppable. Force lightning can be deflected and absorbed by a lightsaber, and select Jedi have proved able to neutralize the technique through the power of the light side.

APPEARANCES

Star Wars: Return of the Jedi, Star Wars: Attack of the Clones, Star Wars: Revenge of the Sith, Star Wars: The Clone Wars
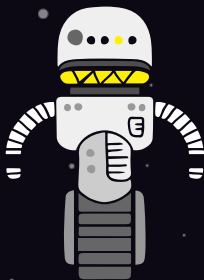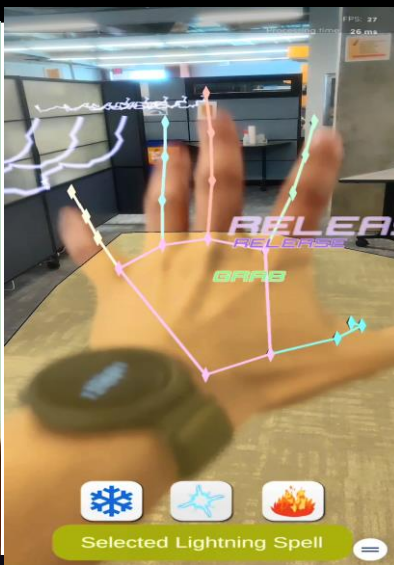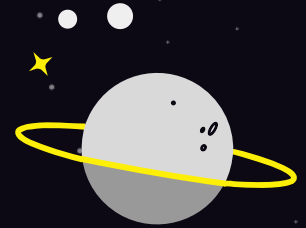
AFFILIATIONS

Sith

NEVER GIVE UP

WHAT I ORDERED ON WISH

WHAT I GOT

RELEAS

GRAB

Selected Lightning Spell

MOBILE APP

"The greatest teacher failure is."

—Yoda

Challenges

1 SDK's documentation isn't updated

2 Finding the center of the palm to launch spells

3 Couldn't test the app on unity and had to build it out everytime

4 False positives with the tracking and gesture detection

Why Hand Tracking?

Over the coming years, you can expect hand tracking to become the norm in extended reality—virtual, augmented, and mixed realities.

Hand tracking offers near-infinite interaction possibilities, freeing designers to be as creative as possible. In addition, it's going to feel more natural to first-time VR/AR users as they can carry on their natural hand gestures into the virtual environment.

COOL VIDEO
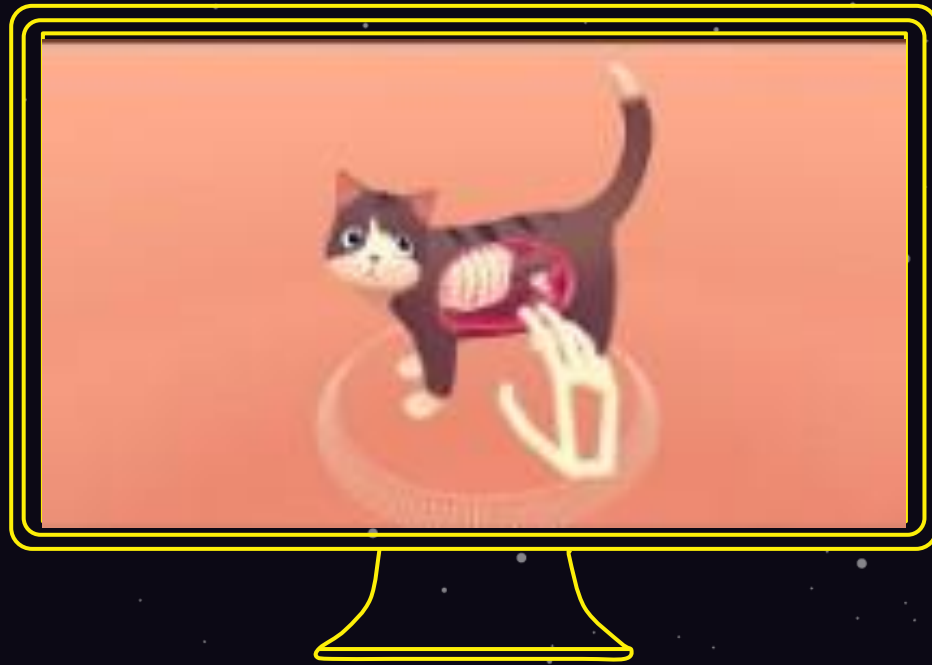
Hand Tracking Tech

SOFTWARE

- Manomotion SDK

- OpenCV based ones

HARDWARE

- Azure Kinect
- Leap Motion
- Oculus Inside Out
- Intel Real Sense

Future Improvements

1. Add more effects
2. Ability to capture and share on social media
3. Spawn enemies to target practice with!

Warning: The app can become quite addictive ;)

Use Cases

1. Entertainment – Games, Fun experiences like AR painting
2. Virtual Tryon's like ring, Gloves
3. ASL training
4. Science lab experiments

THANKS!

ANY QUESTIONS, DO YOU HAVE?