NASA LEC ROBOTIC MINING COMPETITION

Milestone Three Progress Evaluation

Members

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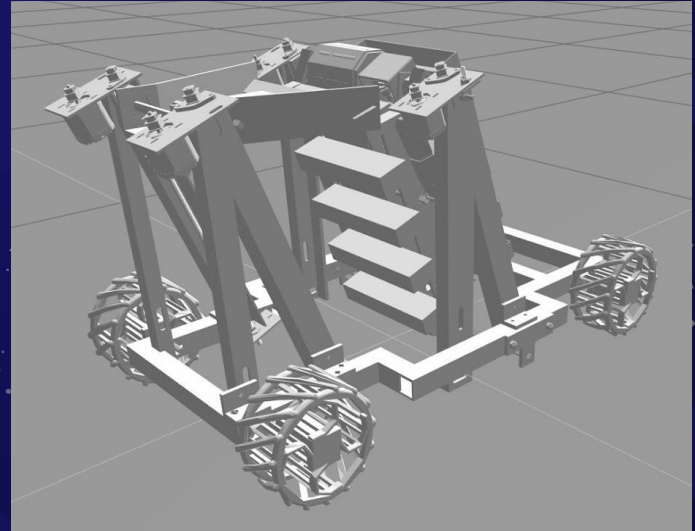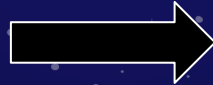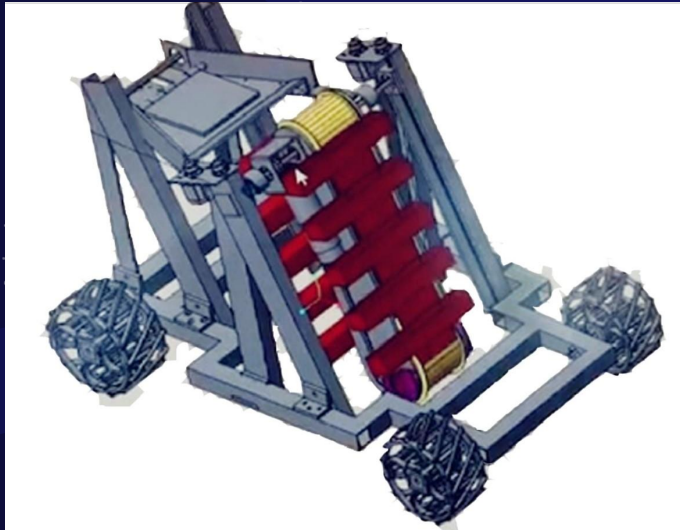# Faculty Advisor

Marius Silaghi - msilaghi@fit.edu

ACCOMPLISHED TASKS - ONE

CAD model was transferred from CREO into a programmable simulation in Gazebo by editing its mesh and exporting it as a ".dae" file in Blender.

ACCOMPLISHED TASKS - TWO

To make the robot simulation move, it was added into the ".world" file as an actor to allow for animation.
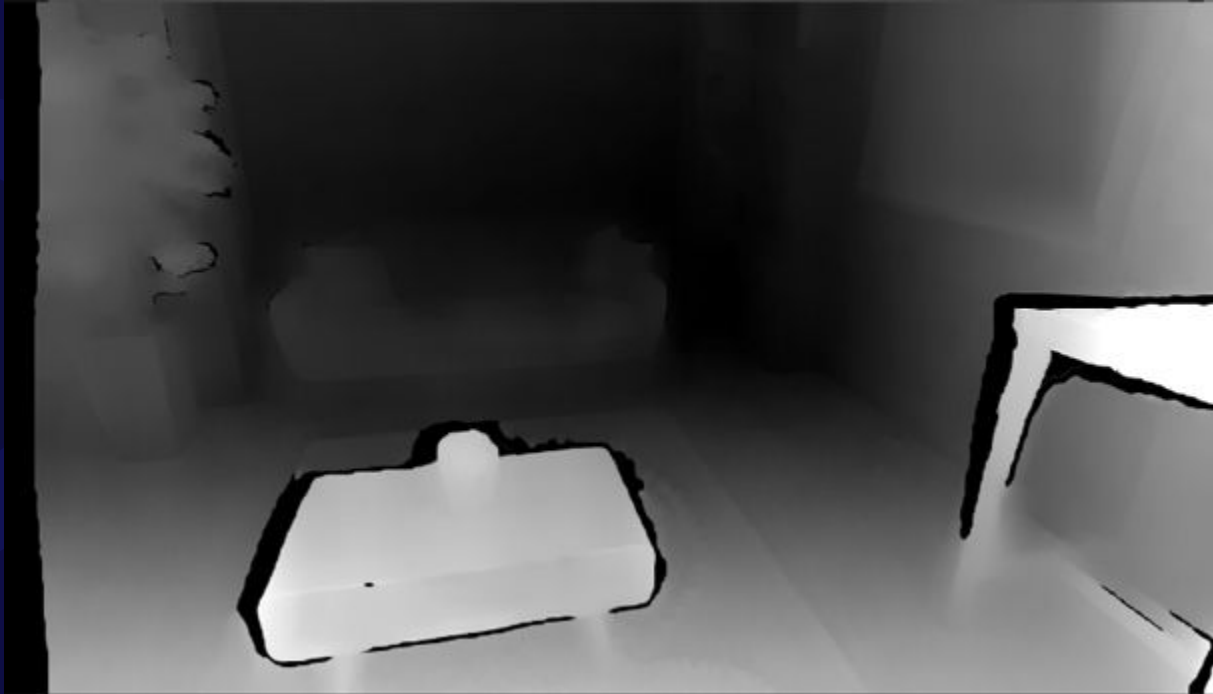
Demo video

ACCOMPLISHED TASKS - THREE

The Jetson TX 2 is now ready to be installed and connected to the hardware. The Zed camera SDK was installed and quick example programs were built to calibrate the camera.
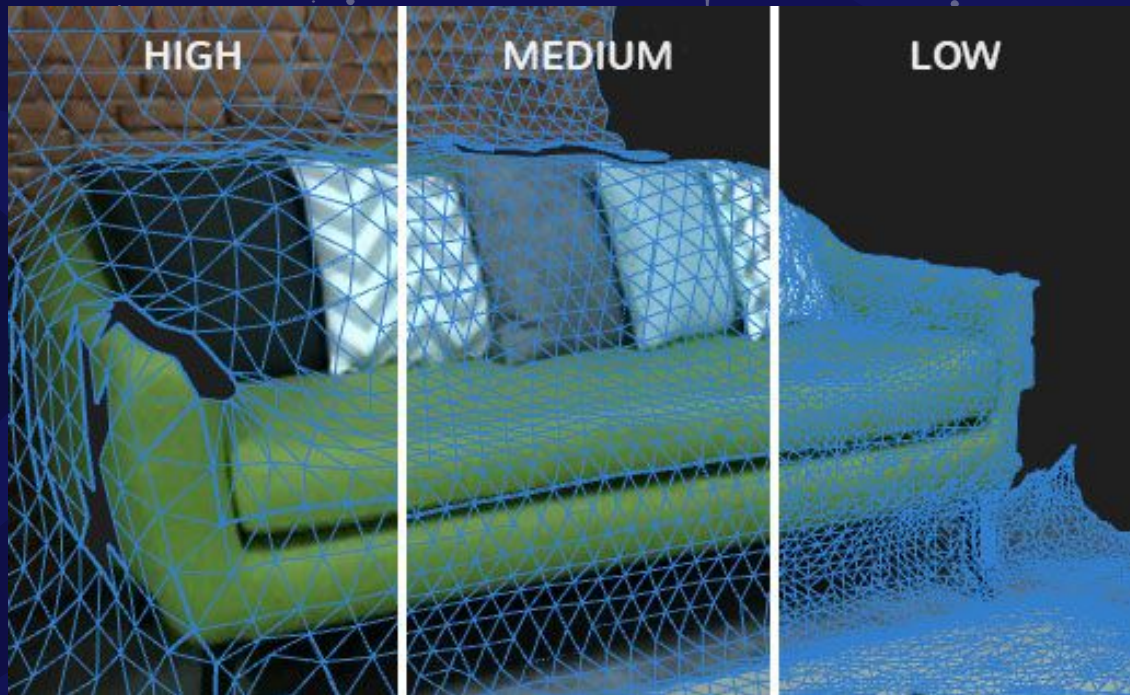
ACCOMPLISHED TASKS - THREE

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PLAN FOR NEXT MILESTONE

01   FURTHER TESTING ZED CAMERA CODE

02   USE CAMERA WITH PHYSICAL ROBOT

Next Milestone Tasks - 1

We currently have code that demonstrates how the ZED camera operates. It is able to take a full 360 degree view of a room and create a mapping of that room. We wish to further this code to identify possible obstacles so that in the future the robot can use this information to move accordingly.

Next Milestone Tasks - 2

We would like to start using our code in conjunction with the actual physical robot. However, we are not sure if this is possible yet because of the other hardware subteams.

Next Milestone Tasks - 3

We will continue to improve our simulation and start to add more to the simulated environment. This will ensure that we can start coding before the hardware is even finished and installed.
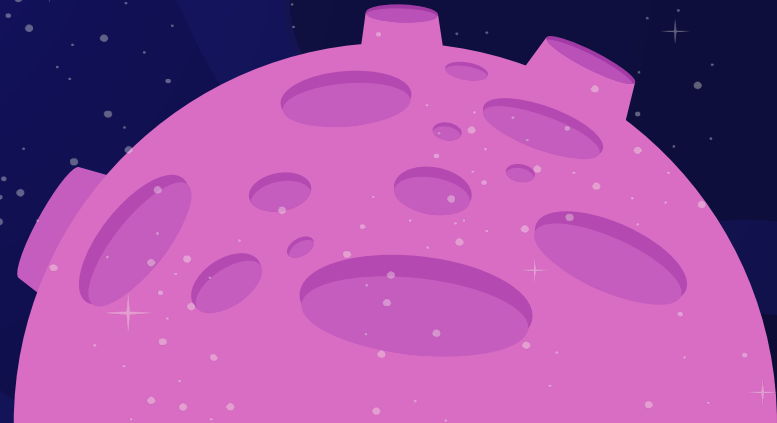
WITH ADVISOR

- November 21 - via email

WITH CLIENT

- November 2 - via Zoom
- November 9 - via Zoom

THANKS!

Questions?