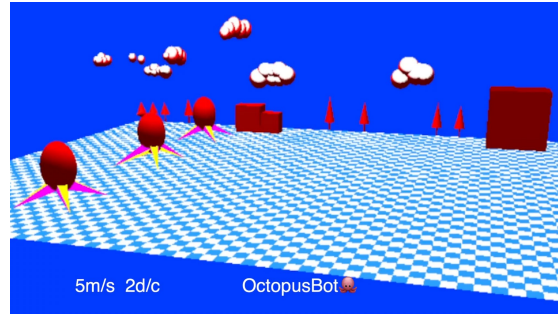


MECS 4510

EVOLUTIONARY COMP & DESIGN AUTO.



Name: Feiyu Yao & Wenjie Lin

UNI: fy2263 & wl2789

Instructor: Hod Lipson

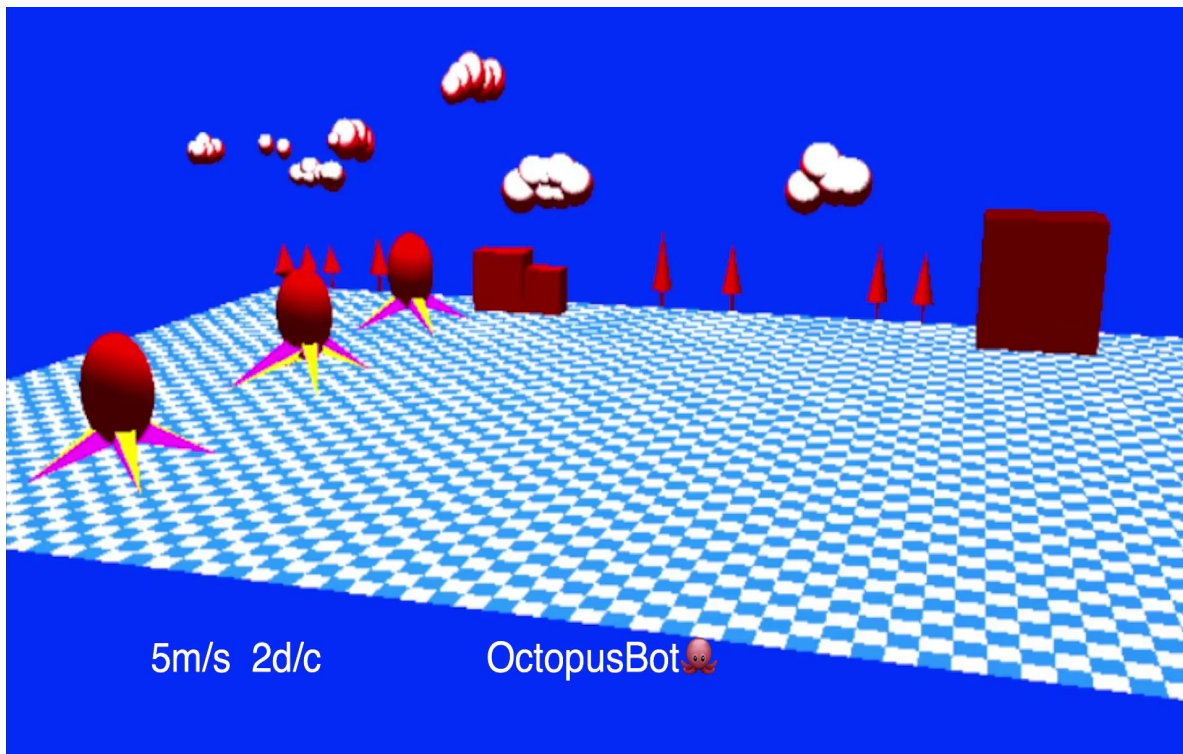
Grace hours used: 0

Grace hours gained: 0

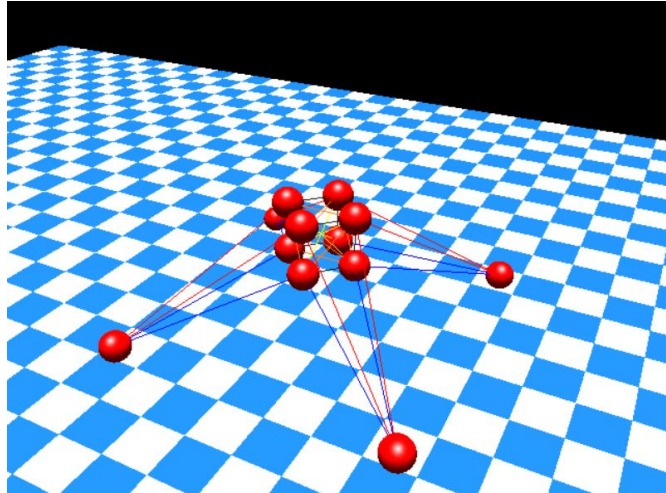
Grace hours remaining: 365

Date: 12/07/2021

Video of Best OctopusBot



Representation Diagram



Same origin length springs share the same k , a , b .

Five different origin lengths

Side of the cube:

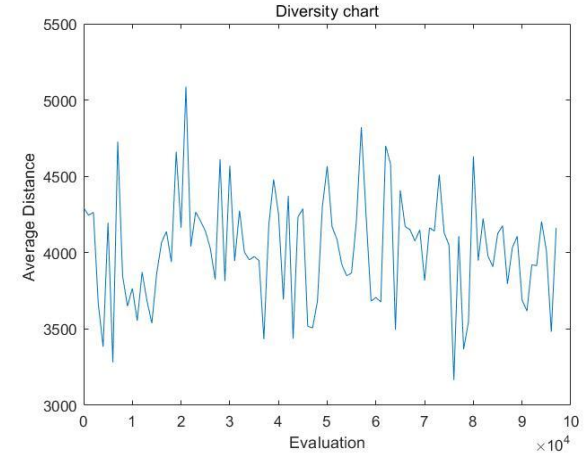
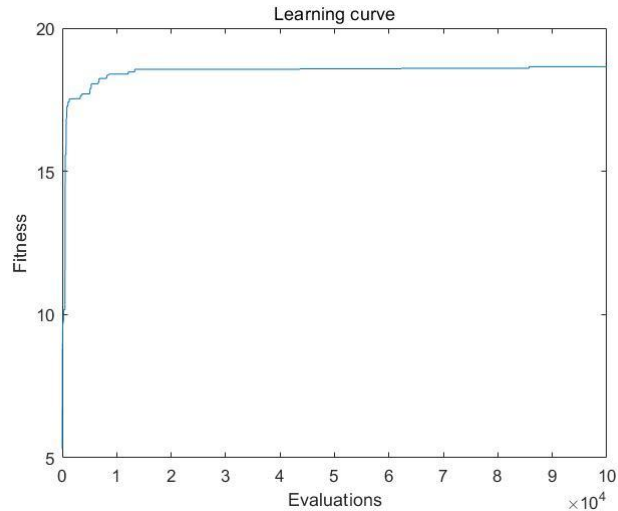
The face diagonal of a cube

The body diagonal of a cube

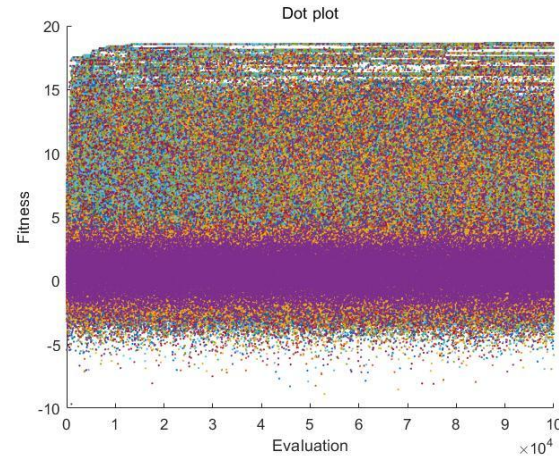
The upper part of the leg

The lower part of the leg

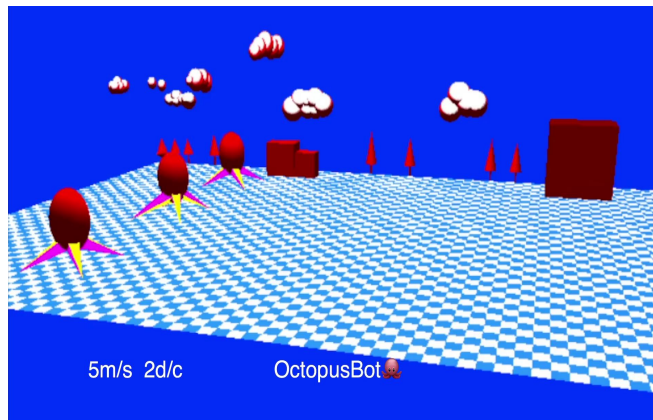
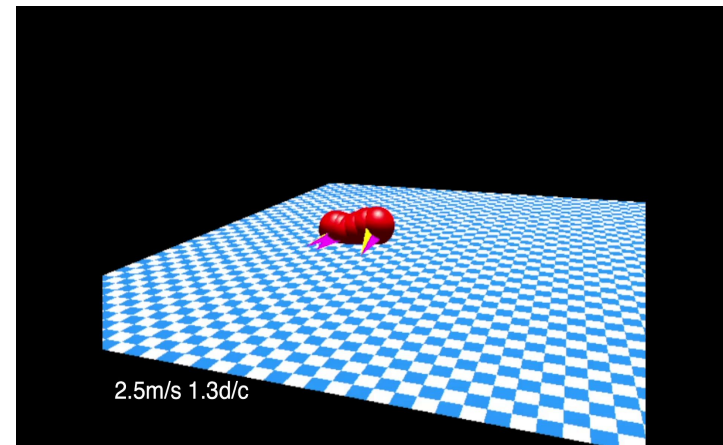
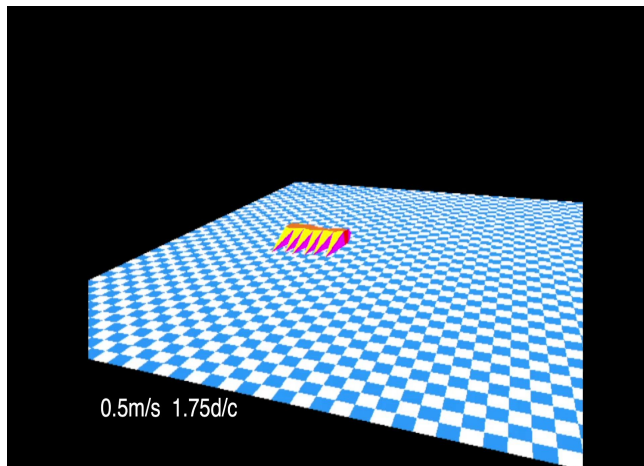
Curves



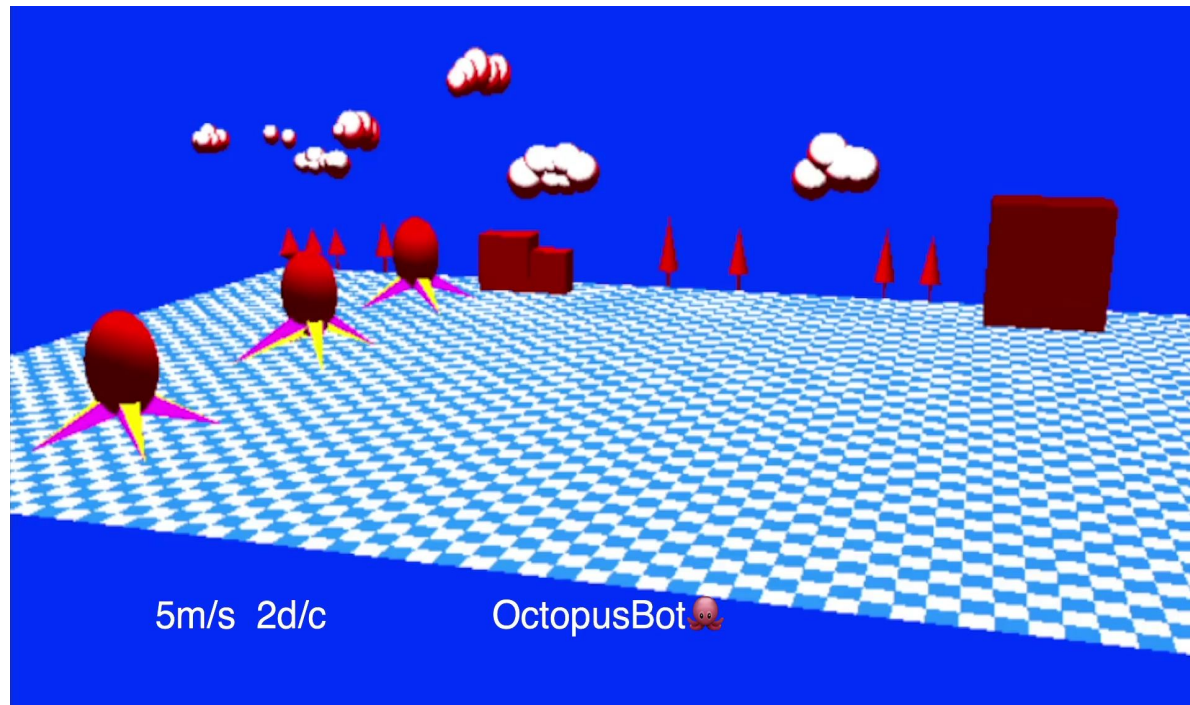
Age pareto is used to ensure diversity



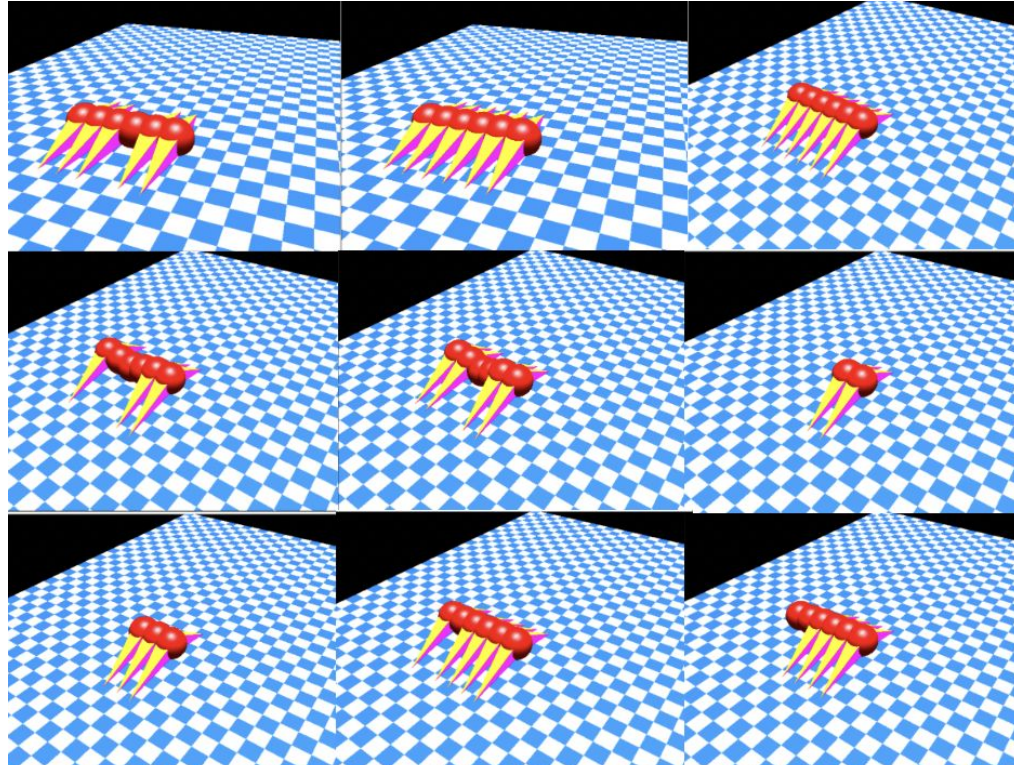
Multi Robot Videos



Single Video with Multi Robots

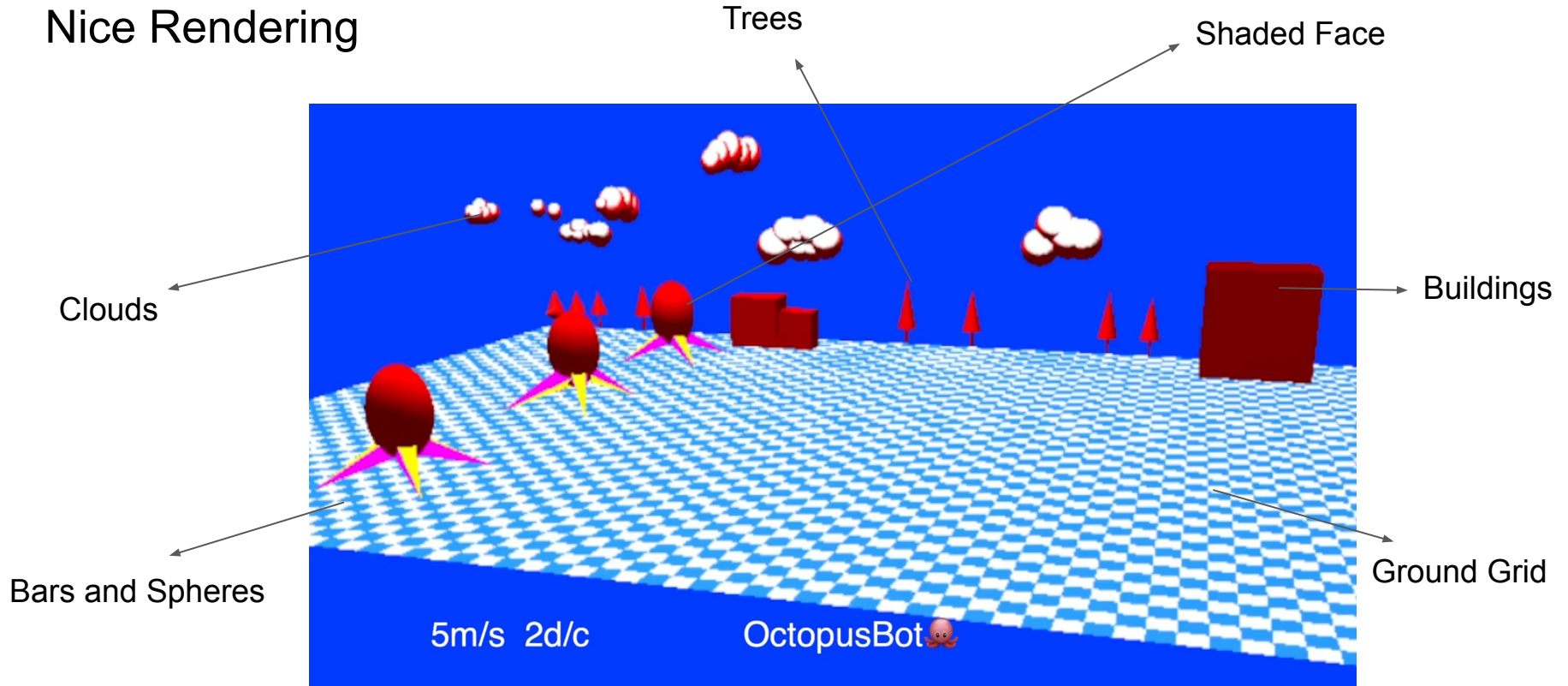


Robot Zoo

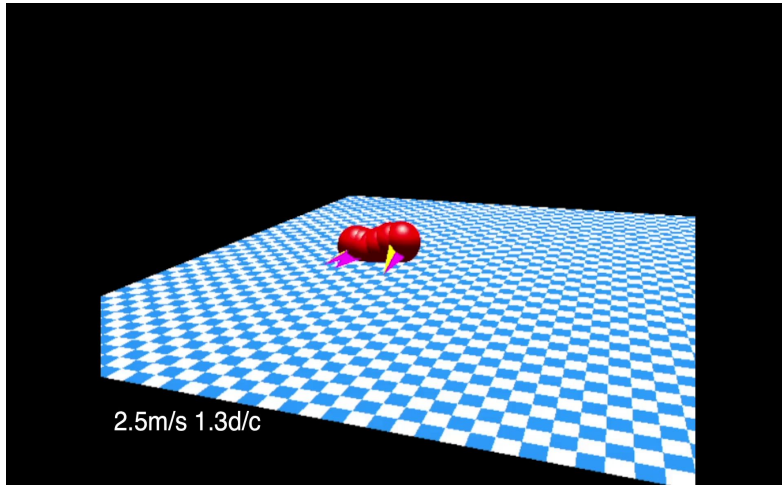


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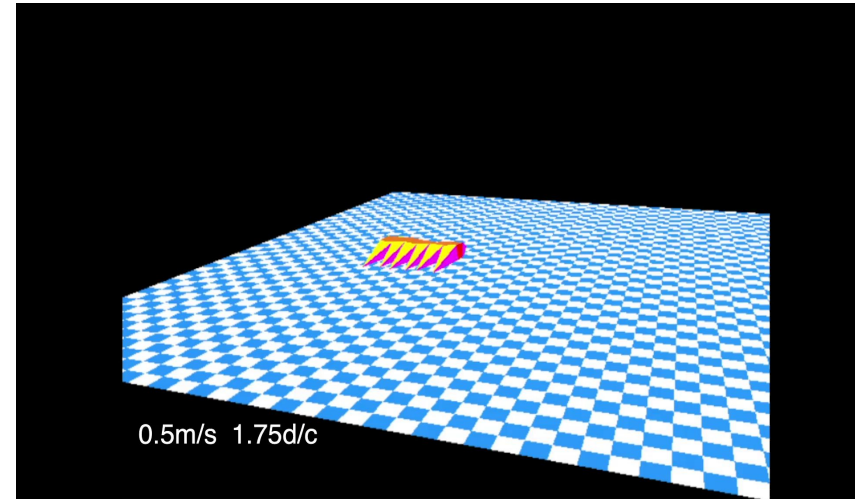
Nice Rendering



Comparison with Different Fitness Criterion



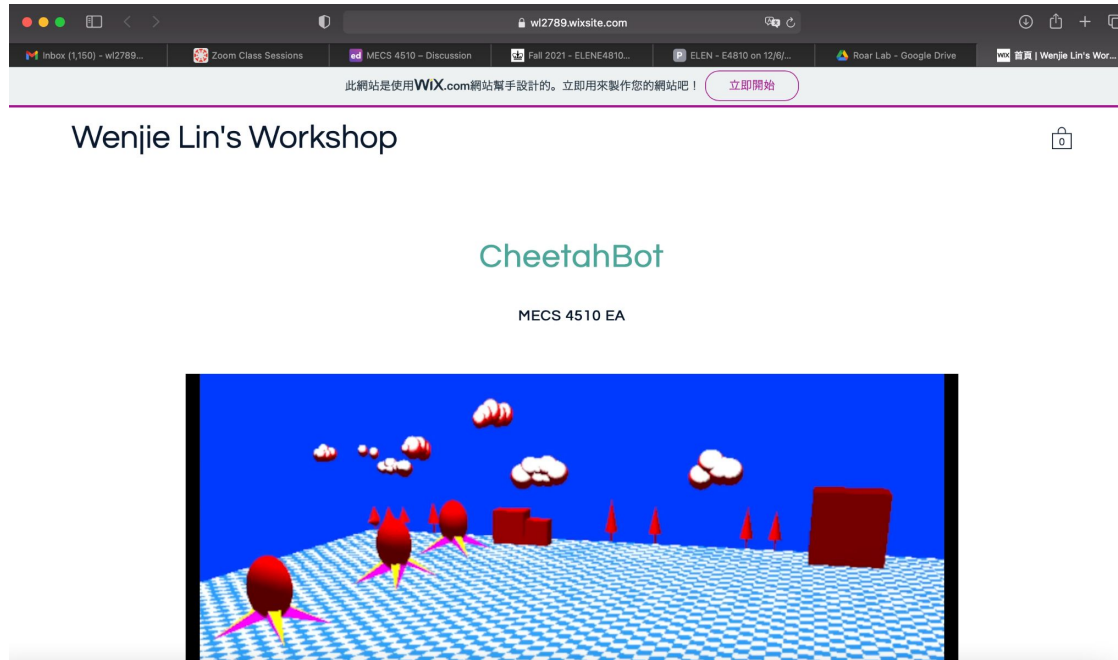
Fitness is the length traveled by the robot.
If the robot jumps, the fitness of the robot will be reduced.



Fitness is the length traveled by the robot.
If the robot jumps or rolls, the fitness of the robot will be reduced.

Post Video on Portfolio

<https://wl2789.wixsite.com/wlworkshop>



Thank you for your time!