

Robot Project – “Puppy”. First Draft.

Links and preliminary plan.

Aarhus. February 27th 2020.

Below you will find links and preliminary plan, as of February 2020.

Links:

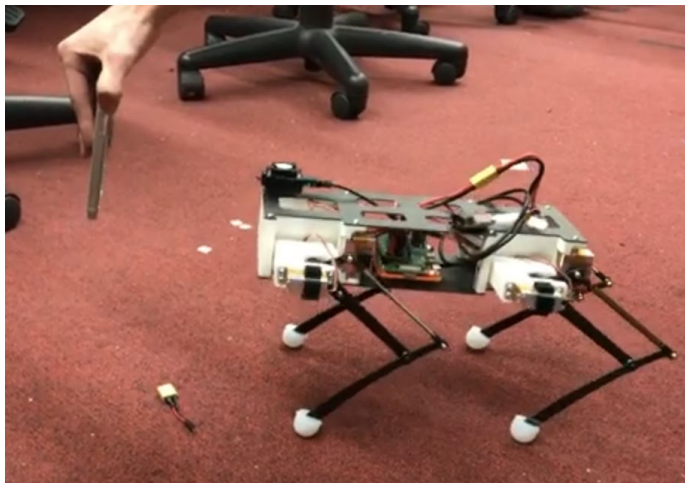
<https://www.dailytend.com/2020/01/30/stanfords-doggo-quadrupedal-robot-and-siblings-pupper-and-woofer-are-coming-to-tc-sessions-roboticsai-dailytend/5623/>

<https://github.com/Nate711/PupperPythonSim>

Pupper:

https://www.youtube.com/watch?v=iyuJq_Pn7TM

<https://stanford195.autodesk360.com/g/shares/SH919a0QTf3c32634dcfa1c5485440dba9fb?viewState=NoIgbgDAdAjCA0IDeAdEAXAngBwKZoC40ARXAZwEsBzAOzXjQEMyZd1C0AzAZhgE4ALACMAHLgCOANggAmGOIEB2AMaTxjGQFYh4gCailuxssMwZfNAF8QAXSA>





Preliminary Plan:

Initial Steps:

February 2020.

We (Jonas, Kaj & Simon) have started the project.

Based on the drawings from the Stanford project Jonas will try to actually construct our version of the physical robot.

As we plan to make the robot with the ROS framework,

<http://wiki.ros.org/ROS/Introduction>

We have contacted various people to see if they can help us with courseware, training, summerschools etc. in order to get started.

Contacted:

Alexander Winkler, for some initial comments on how to proceed.

<http://www.alex-winkler.com/>

ROS Summer school in Aachen :

<https://www.fh-aachen.de/fachbereiche/maschinenbau-und-mechatronik/international/ros/>

In order to hear whether it would be possible for us to attend there.

Gijs van der Horn at the Tu Delft, Open Courseware in ROS ..

To hear if he has any suggestions:

<https://ocw.tudelft.nl/courses/hello-real-world-ros-robot-operating-system/>

Rasmus Bajs will make a robot site as a part of his final project as an IT technologist. He will be working on a site where you can “show us your project”. Eventually the idea is that students should be able to upload video, pictures and text about their robot projects. In order to be able to share this with family and friends.

Moving forward:

March – June 2020. The rest of the semester spring 2020.

Jonas makes the actual robot. And begins working on it himself. Trying out some initial controls.

March 12. Meet with Ruslan Trifonov in Nyborg to hear about his ROS experiences.

July – August 2020.

We (Jonas, Kaj & Simon. Perhaps more teachers, perhaps a couple of students as well?) attend either a summer school in ROS robotics, complete some online ROS training, or attend some ROS training/course Details to be worked out.

August - September 2020.

We (Jonas, Kaj & Simon) try to figure out a reasonable “job” the robot can do as a student project, using the ROS motion planner, along with OpenCV – and perhaps other sensors as well. The “job” should fit in with the students skill levels, and be part of the curriculum in a reasonable way.

Somewhere around here we are should be ready to present a more detailed plan for how to proceed.

It should also be decided around here, whether network should be integrated into the project within the ROS framework (Ask Peter).

September – November 2020.

It would be a good thing to have a student intern working on some of the ROS motion ideas before we try them out in class. Again to get a better understanding of what we can get to work in class. And what not so much.

Late 2020 – Spring 2020.

Include a ROS “puppy project” in the curriculum for IT Technology.