TRS: An Open-source Recipe for Teaching/Learning Robotics with a Simulator.

Learning Robotics with a Simulator: Setup Your Laptop in 5 min, Code a Control, Navigation, Vision or Manipulation Project in 100 Lines.

Renaud Detry
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Simulation VS Real Robot
V-REP: An Easy Robot Simulator

- Trivial installation — Linux, Mac, Win
- Remote API for C++, Python, Matlab, ROS
- Stable, fast.
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V-REP + Peter Corke’s Matlab Robot Toolbox

Code

- Control
- Vision
- Navigation

in 100 lines of code!
What You Get

- Recipe for organizing a Master-level robotics project
- The project: pickup groceries from a table and store them in baskets.
- Involves: control, navigation, mapping, vision and manipulation.

http://teaching-robotics.org/trs
vrep = remApi('remoteApi', 'extApi.h');
id = vrep.simxStart('127.0.0.1', 57689, true, true, 2000, 5);

[res image] = vrep.simxGetVisionSensorImage(id, cam);
vrep.simxSetJointTargetVelocity(id, wheel1, 10);
How To Use

- Freely distributed via GitHub
  https://github.com/ULgRobotics/trs.git
- master branch: code & V-REP models (GPL)
- gh-pages branch: doc & project details (CC)

http://teaching-robotics.org/trs
Teaching-Robotics.org: a community-driven website for sharing resources related to teaching robotics to Master and PhD students.

Motivation

This website aims to offer community-driven resources related to teaching robotics.

Ressources

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Events

Hong Kong, June 5 2014, at ICRA: Workshop on using MATLAB/Simulink for Robotics Education and Research.

Chicago, September 14 2014, at IROS: Tutorial on teaching robotics with a simulator.

Contact

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An Open-source Recipe for Teaching/Learning Robotics with a Simulator

:: setup a laptop in 5 minutes, write a control, navigation, vision or manipulation program in 100 lines of code

If you are interested by this event, check out this ICRA 2014 workshop: MATLAB/Simulink for Robotics Education and Research!

TRS 2014: Motivation

This tutorial is organized around a cross-platform robot development and
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