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Project Robotice

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Abstract

Robotice is a framework for robotics, physical computing, and the Internet of Things, written in the Python programming language.

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2 Robotice

2.1 Introduction

Python daemon for collecting data from peripherals(sensors, ..) and sending instructions into external actuators.

2.1.1 Motivation

Lowermost layer of Robotice which must resolve differences in single-board computers(BB, Rpi, etc.). We must have driver for every device and every platform.

2.1.2 Goals

Collecting and Acting - GPIO, I2C drivers etc.

Autonomous - collecting and acting must work without internet connection

Support - support for most of OS and SB computers

2.1.3 Problem Statement

- Drivers for external peripheral devices(GPIO, I2C, ..)
- Differences in single-board computers
- Differences on the OS Layer(pkgs, etc.)

2.1.4 Related Projects

Cylon.JS

Platform builded on the Node.js under JavaScript language. Supported is about thirty platforms, as BeagleBone, Rpi, and Drone.

Artoo

Ruby copy of Cylon.JS

Gobot

Gobot is a framework for robotics, physical computing, and the Internet of Things, written in the Go programming language

2.1.5 Structure of Project

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3 Robotice Control

3.1 Introduction

Django based application for easily controlling every system powered by robotice.

3.1.1 Motivation

Independent application for controling robotice systems over AMPQ.

3.1.2 Goals

Web interface - Adding new device etc.

REST API - API for all robotice features

3.1.3 Problem Statement

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