Python Software Setup Guide

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Author: Tom Sharkey

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Note: Currently this is just an informal document to detail the project’s anaconda setup.

# Overview

This document gives an overview of the Python motor control GUI for use with the CMR Zynq Platform motor control option card. A number of companion documents are available here, such as the QuickStart guide and a document detailing the hardware.

# Anaconda Setup

The service used for package management and code distribution in this project is Anaconda. This allows for the user to recreate the python environment used for this project with ease. The environment created for this project can be imported using Anaconda and a .yml file. If you wish to create an environment from scratch to run the project yourself, simply consult the “requirements.txt” file in the MotorControlGUI folder, which lists all the python modules requires to run the project.

Requirements:

* Anaconda 3
* The project file (MotorControlGUI)

In order to recreate the environment used for the project, simply download the MotorControlGUI folder. Take note of the folder into which you download this file. Within the MotorControlGUI folder, there should be a file called “environment.yml”. Once you have installed Anaconda, open your anaconda navigator by typing “anaconda navigator” into the search bar. This opens a command prompt. To create the anaconda environment:

**“conda env create -f Your/Path/Here/MotorControlGUI/environment.yml”**

Where **Your/Path/Here** indicates the directories in which MotorControlGUI was downloaded. For example

**C:/Software/MotorControlGUI/environment.yml**

This creates a new anaconda environment. To see if it has been successfully created, use the command:

**“conda env list”**

This prints all available anaconda directories, with a (\*) symbol next to the active environment. By default, this is the base environment. Activate your new environment with the command:

**“conda activate motorGUI\_env”**

You are now ready to launch the project. If you simply want to run the application, use the following commands.

“**python** **Your/Path/Here/MotorControlGUI/app.py**”

If you want to look at the source code, in the anaconda-supported IDE of your choice (Spyder is recommended for this project), open the “app.py” file in the MotorControlGUI folder. If you need to install an IDE, use the following command, and hit [y] on the keyboard when prompted:

**“conda install spyder”**

You can then run this IDE in the current environment from the anaconda prompt by typing:

**“spyder Your/Path/Here/MotorControlGUI/app.py”**