Manual

Connor Sedwick, Behnam Saeedi, Collin Dorsett

CONTENTS

1 INSTALLATION

In order to operate this software users must have Python 2.7 or later installed as well as the latest version of Kivy. The Kivy website provides documentation on how to install their software.

URL: https://kivy.org/docs/installation/installation.html

Some features will also not be usable unless you have Google's TensorFlow™installed. To do so go to the following URL and follow the instructions:

URL: https://www.tensorflow.org/install/

1.1 Linux

Install the Kivy API by running going into the dist directory and doing the following:

1) Type the following command into our command prompt: ./install.sh

2) It will ask for root permissions

3) Then follow the installation process To run use the following command: "./WYSIWYG.sh"

1.2 Windows

1) To install Kivy please refer to the Kivy API website found at this URL:

   https://kivy.org/docs/installation/installation-windows.html

2) Please ensure Python 2.7 is installed.

3) To run our software please run the command: ./WYSIWYG.sh

2 OPERATING THE SOFTWARE

Essentially, this software acts as a visual programming application for the Python programming language. Users operate the software by clicking the "Output" and "Input" buttons on nodes to draw connections between them. These connections are sent to the interpreter to generate Python code based on the types of nodes placed in the build space and their respective values. The build space is interpreted when and only when the user clicks on either the "Make Layer" button or the "Extract" button.

2.1 Blocks

To the left of the App window will be a listing of buttons. These buttons are listed as:

- Variable: when clicked spawns a dragable node with two text fields: Name and Value
- Methods: when clicked spawns a dragable node with an input button and output button which allow for connections to be drawn between it and other nodes to represent arguments and returns
- Class: (still being designed)

- Probe: (still being designed)
- Output: when clicked spawns an output block which is essentially a print statement that prints the value of the last node connected to it.
- Delete: when clicked clears the build space of nodes

2.2 Layers

Layers act by interpreting the structure of the current build space and creating a code file in the Python language. Essentially, when the user clicks the ”Make Layer” button, the diagram they have drawn will be interpreted as Python code and written to a Python file. After doing this we recommend the user clicks the ”Delete” button to clear the build space for them to work on their next layer, otherwise any additions to the build space will effectively create a clone of the previous layer with the new additions.

2.3 Extract

The ”Extract” button when pressed will cause the program to interpret the build space and generate appropriate Python code syntax in a Python file. This feature is used by our ”Make Layer” feature as well. It essentially turns the diagram into s runnable Python code file. If the user has made a mistake in their diagram, an error will be displayed on the build space.

3 STRUCTURE

For more information on the structure and design of the software please refer to the Design Document found on page 14.