Variational Autoencoders & Missing Values Completion Algorithms GUI

by Christos Kormaris

A graphical user interface (GUI) has been implemented for the project of this thesis, using Python and the **tkinter** library.

Go one level up from the project directory and create the directory **DATASETS**. Then, download all the datasets from the URLs in the file **datasets_urls.md**, extract them and move them to the **DATASETS** folder.

Now, go to the project directory. First, browse to the project directory of the thesis and install the required Python dependencies, by typing:

```
pip install −r depencencies.txt
```

Listing 1: command for installing Python dependencies

To run the GUI from the terminal, type:

```
python vaes_gui.py
```
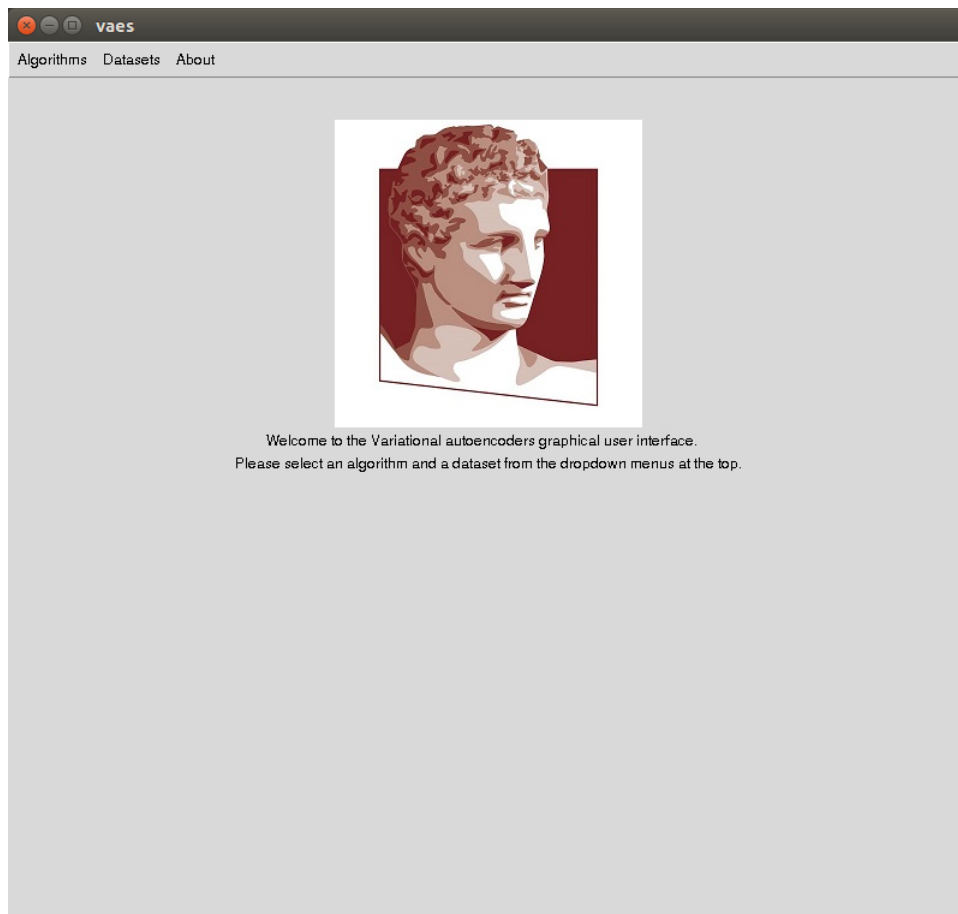
Listing 2: command for running the GUI

Figure 1: GUI Welcome page.

(a) GUI Algorithms dropdown menu.

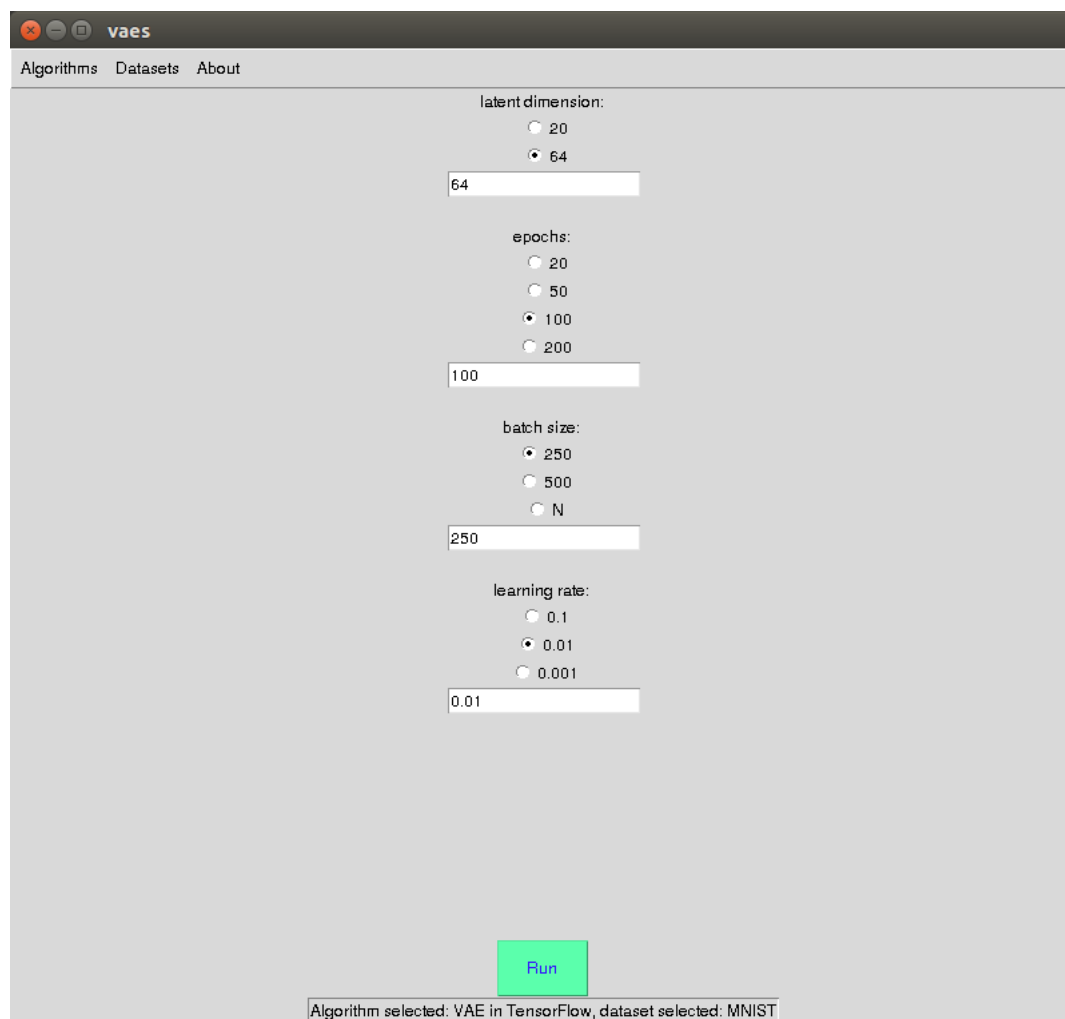(b) GUI Datasets dropdown menu.

Figure 2: Dropdown menus.

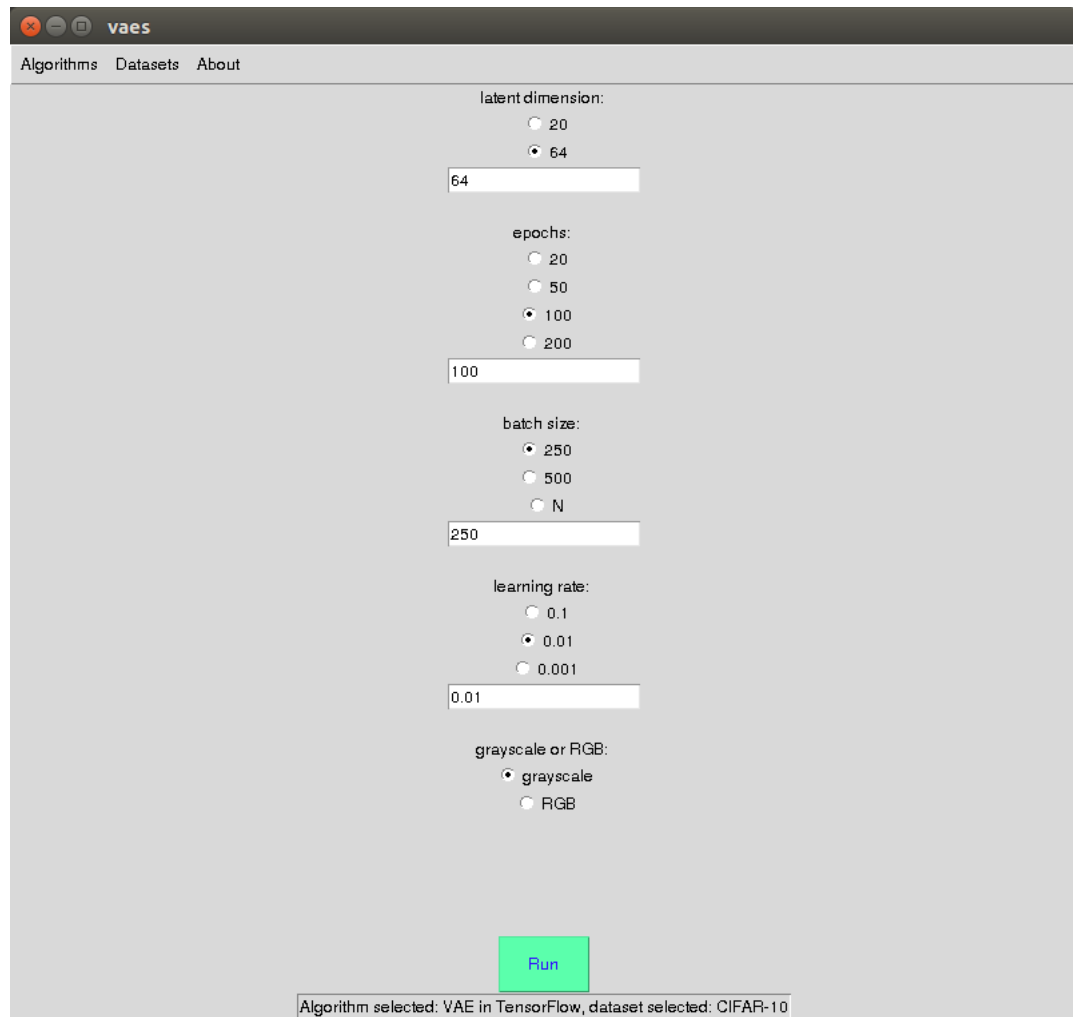Figure 3: GUI VAE in TensorFlow, MNIST dataset.

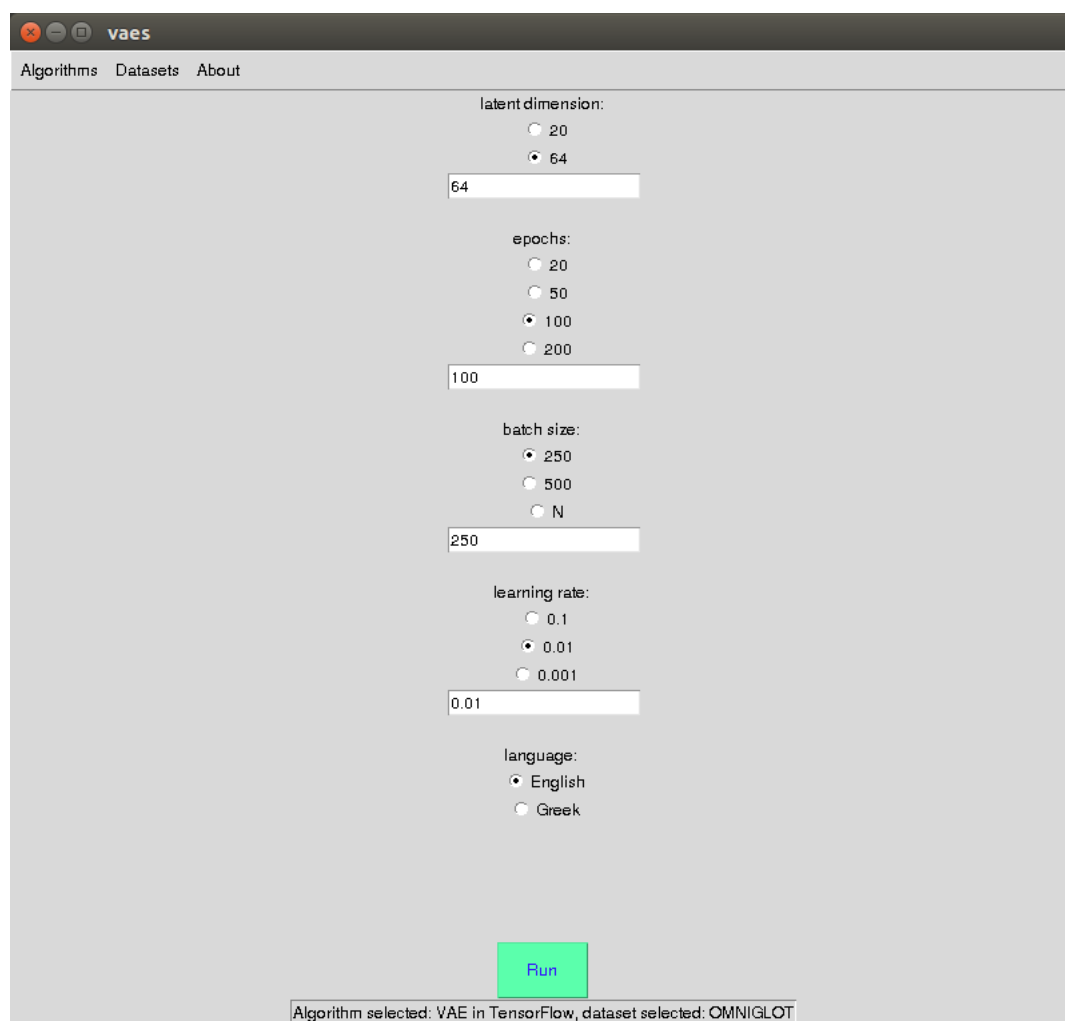Figure 4: GUI VAE in TensorFlow, CIFAR-10 dataset.

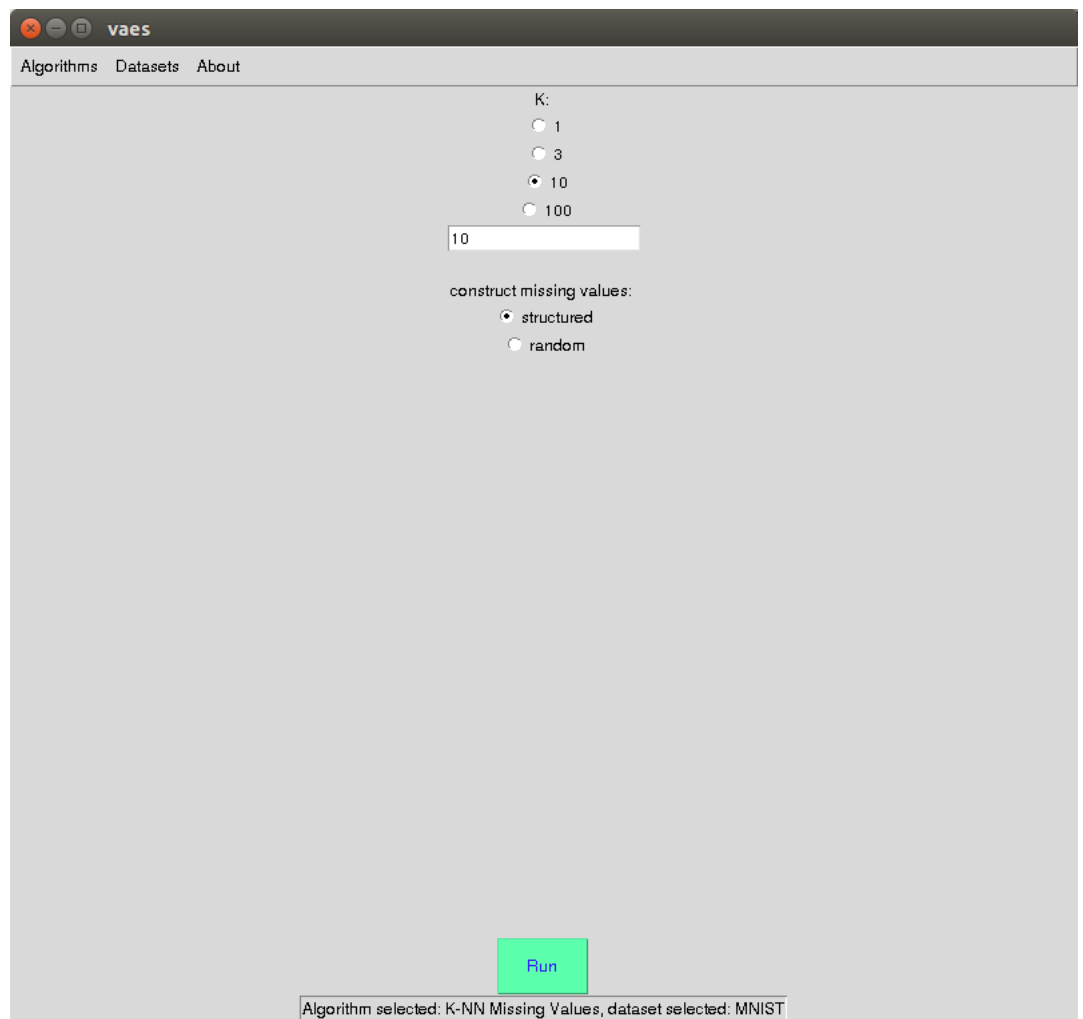Figure 5: GUI VAE in TensorFlow, OMNIGLOT dataset.

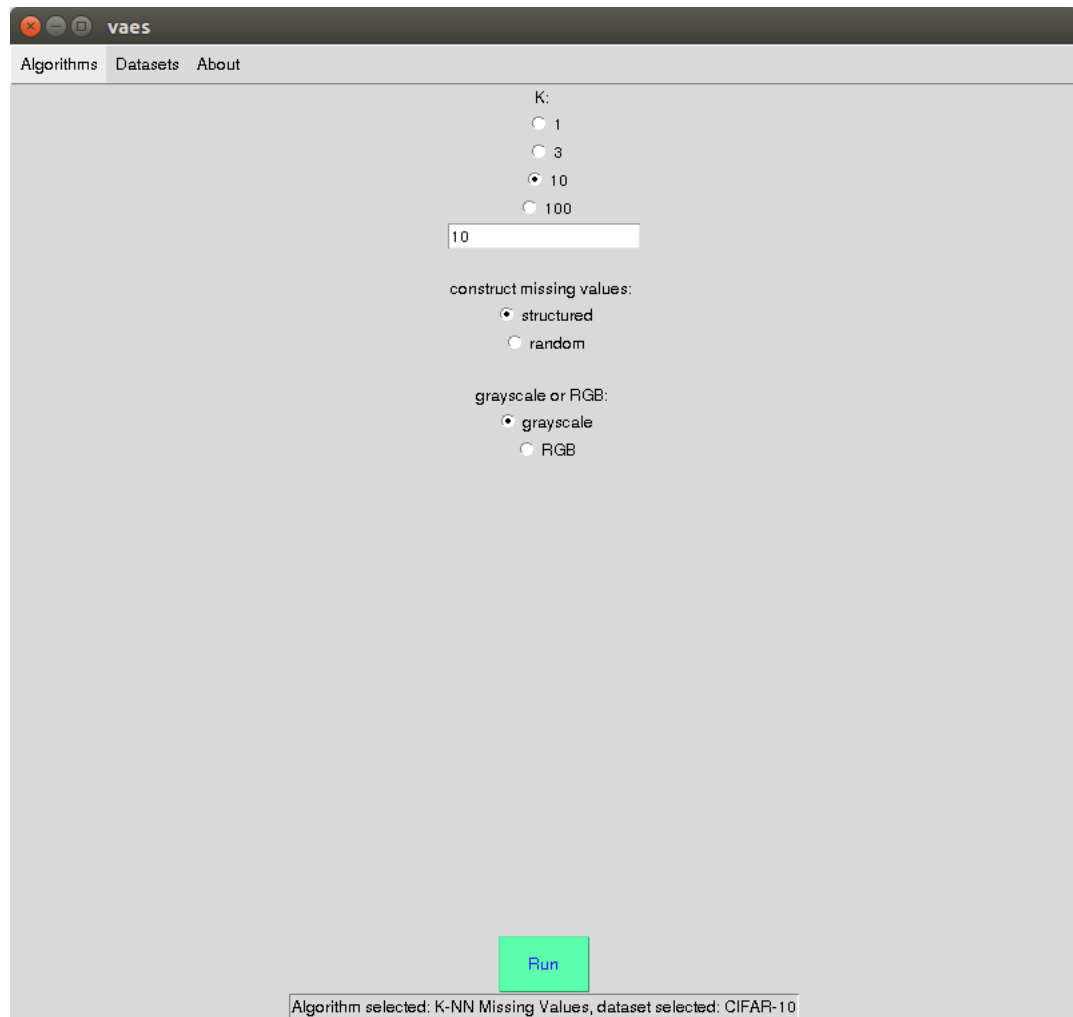Figure 6: GUI K-NN Missing Values algorithm, MNIST dataset.

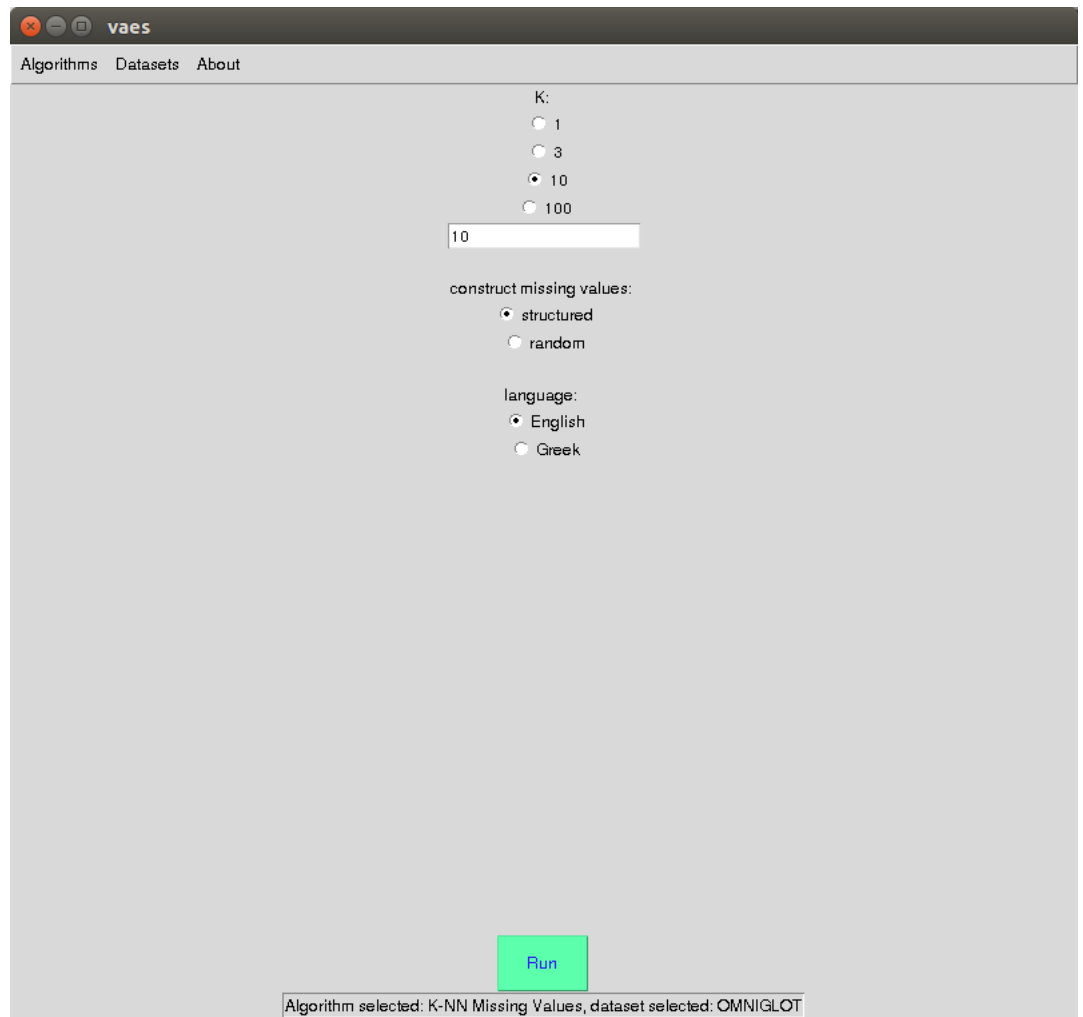Figure 7: GUI K-NN Missing Values algorithm, CIFAR-10 dataset.

Figure 8: GUI K-NN Missing Values algorithm, OMNIGLOT dataset.

Figure 9:
GUI datasets details.

Figure 10: GUI About.