A multitude of toolkits exist for creating a graphical user interface in Python. This document will compile the most popular toolkits along with their advantages and disadvantages. In addition, this document will state which toolkit is the best option for the DigitAIze project and why.

- Tkinter
    - Advantages: included with standard installs of Python; many learning resources available; free software released under a Python license; simple syntax
    - Disadvantages: default appearance is outdated; difficult to create complex applications; fewer widget options
- PySimpleGUI
    - Advantages: easy to learn; license allows commercial use; available for Android and Raspberry Pi
    - Disadvantages: difficult to change layout at runtime; bad documentation;
- Kivy
    - Advantages: supports mobile applications; released under MIT license
    - Disadvantages: smaller community; non-native UI appearance; large package size
- wxPython
    - Advantages: large, active community; license allows commercial use;
    - Disadvantages: still under active development and less stable; less optimized for high-performance graphics and animations
- PyQT
    - Advantages: supports wide range of widgets; smoother code base; good documentation
    - Disadvantages: steep learning curve; must publish source code if planning to sell

For this project, we have decided to use Tkinter. While Tkinter is less powerful than toolkits such as PyQT or wxPython, it is extremely simple to use and does not require any installation. We do require a complex user interface for DigitAIze as the main purpose of this project is the functionality of the program i.e. the machine learning algorithm. In addition, if we were to want to expand this project into a business, Tkinter's license allows us to do so without having to publish the source code.