

# SGen Desktop User Manual

**VOLT - Conner Vieira**

<https://v0lttech.com>

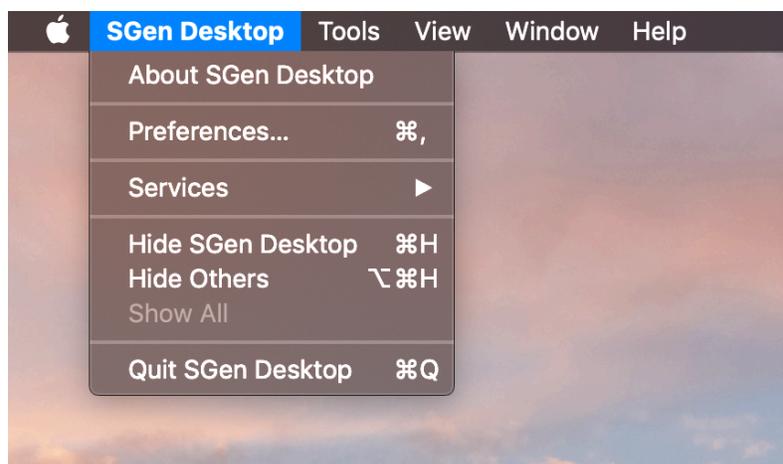
<https://v0lttech.com/sgendesktop.php>

This document can be freely distributed in a non-profit manner as long as the document is left unmodified, and full credit is given to VOLT in the following format. Always cite any information taken from this document as well.

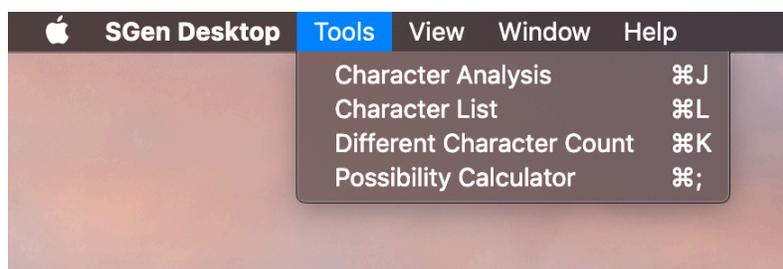
SGen Desktop User Manual (2019)  
VOLT - Conner Vieira  
<https://v0lttech.com>

## Overall Interface

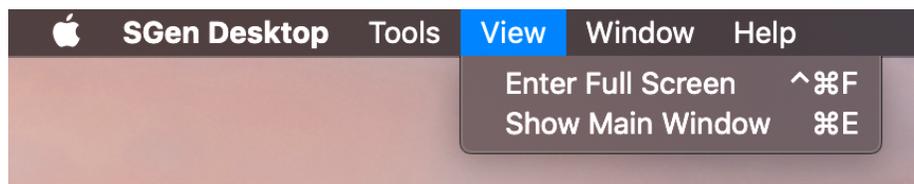
The overall SGen Desktop user interface is extremely similar to many other MacOS apps. When you open the application, you'll be greeted with the main application window. If you'd like to open the application preferences, either press Command + Comma on your keyboard, or click "SGen Desktop" in the tool bar, then "Preferences".



To view the program's built in tools, click "Tools" in the tool bar, then click the built in tool you'd like to open. You can also use any of the keyboard shortcuts listed next to each tool to open them quicker. Keep in mind you can open up more than one window of each tool at the same time, and you can run more than one tool at the same time.



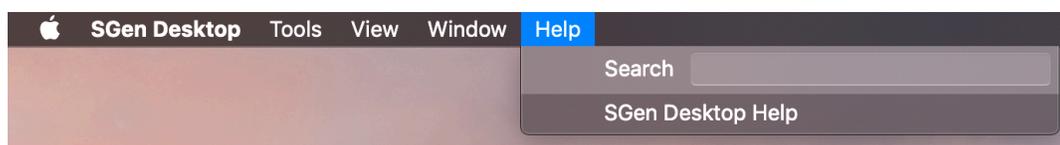
By clicking the "View" menu in the tool bar, you'll be presented with two basic options. First and foremost is the option to make the main SGen Desktop window full screen. Second off, and slightly more obscure, is the option to reopen the main SGen Desktop window. It's actually possible to close all SGen Desktop related windows, including the main application window, without terminating the application. Whether this is just to temporarily reduce distraction, or simply an accident, you can reopen the main application window from here in the event that it gets closed



The “Window” menu presents two more options. First off is the option to Minimize the application. These allows you to temporarily close the SGen Desktop interface without terminating the application, or clearing anything you’ve worked on. To un-minimize the application, just click its icon in the Dock. The second option in this menu is the Bring All to Front. This option will quickly place all SGen Desktop windows on top of all other application windows in order to remain organized during multitasking.



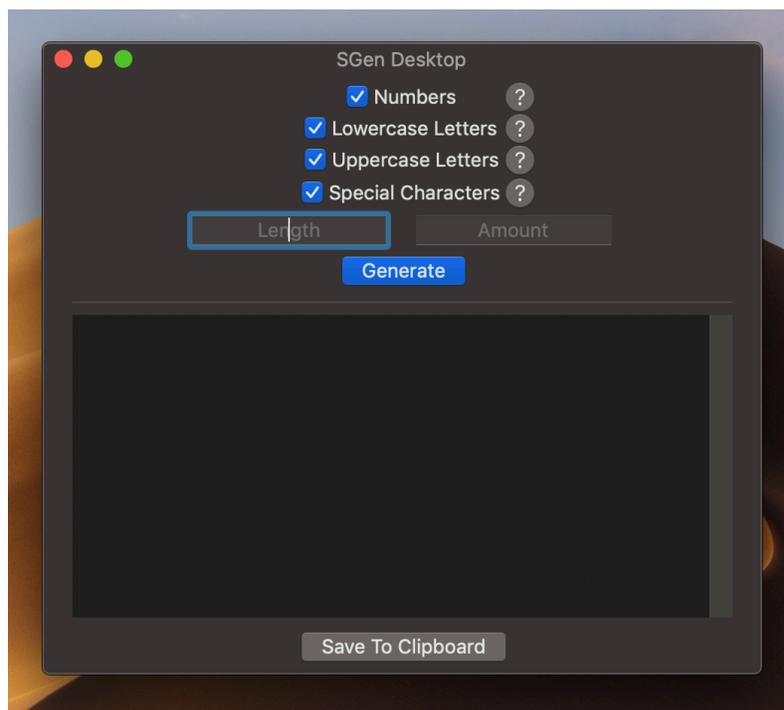
The final menu is the “Help” menu. The Help menu allows you to quickly search all the other menus at once. Just type a menu function you’d like to locate in the search field, and it’ll be automatically highlighted.



## Main Application Window

The main application window is also very clearly labeled. At the top of the window, you'll find four check boxes: Numbers, Lowercase, Uppercase, and Special Characters. These serve as presets for your "input character sample". The input character sample is the list of characters that SGen will draw from when generating random strings. In other words, it's the characters that will appear in your randomly generated strings. If you'd like to see exactly what characters are in each preset, you can click the question mark button beside each check box to open a small pop-over window that displays the list of all characters in that preset. Keep in mind that you can select as many or as few presets as you want. If you want to use your own custom input character sample, use the Base Characters setting, which you can learn more about in the Preferences Window section.

Just below the preset check boxes, you'll find the Length and Amount fields. The Length field is used to indicate how long you want each random string to be. The Amount field is used to indicate how many random strings you'd like to generate in total. After you've filled out both fields with your desired inputs, press "Generate", or press the Enter/Return key on your keyboard.



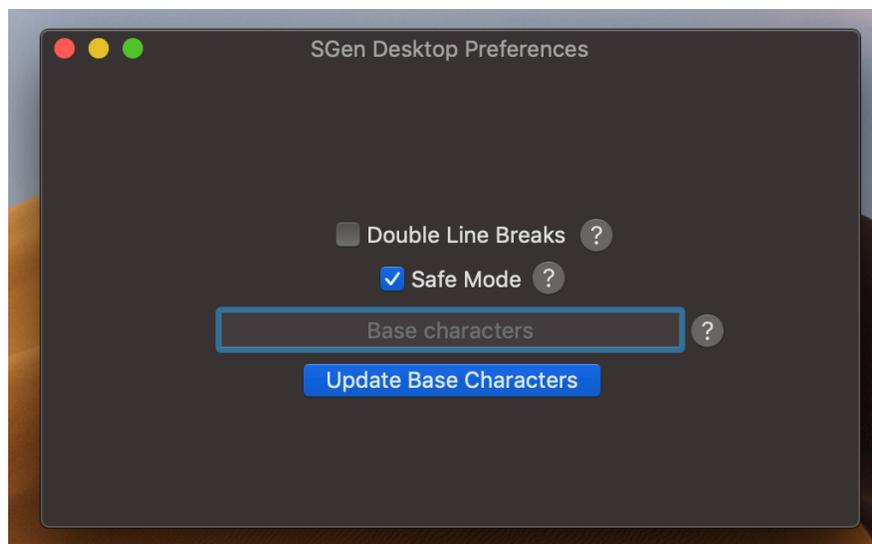
## Preferences Window

The Preferences Window is how you change your personal settings that change how SGen Desktop work. There are currently three changeable settings in the Preferences Window: Double Line Breaks, Safe Mode, and Base Characters.

**Double Line Breaks** - Double Line Breaks determines whether SGen Desktop will put an extra space between each randomly generated string. While most software uses files where a single string would be placed on every line, you may find it convenient for readability sake to put an extra line break so SGen Desktop only places one string every two lines.

**Safe Mode** - Safe Mode is an automatic restriction that caps the amount of characters that can be generated in one sequence to 200,000. This prevents you from accidentally crashing your Mac, or SGen Desktop. If you need to generate more than 200,000 characters, and understand the stability issues involved, you can disable Safe Mode and remove all software restrictions.

**Base Characters** - Base Characters is an extremely useful preference that lets you set a "base set" of characters to be used in the input character sample. For example, if your Base Characters was set to "abc" and you had no other presets enabled in the Main Application Window, then SGen Desktop would only generate random strings using the characters "a", "b", and "c". You can also configure character "weights" using Base Characters. If you set Base Characters to "aabc", then the letter "a" would be twice as likely to generate then the other two characters.



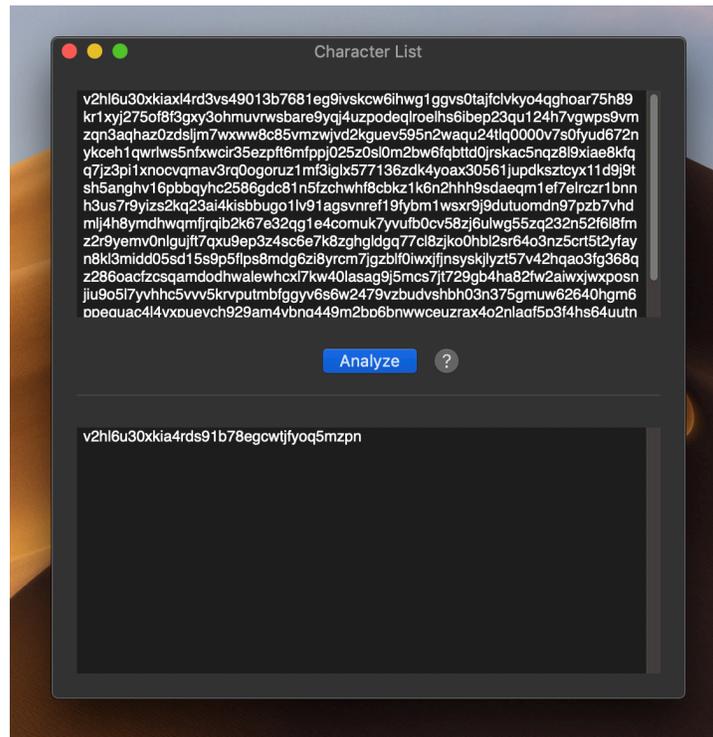
## Character Analysis Tool

The character analysis tool is designed to quickly count how many times each character occurs in a string. This is useful for determining if the probability of each character appearing is in line with what is to be expected with a given generation. For example, if your Base Character set is "aab", then you'd expect "a" to appear twice as many times as "b" does. To use the Character Analysis Tool, just paste your string in the top text field by right clicking inside it, and clicking "Paste". Then press "Analyze", or press Command + Enter/Return.



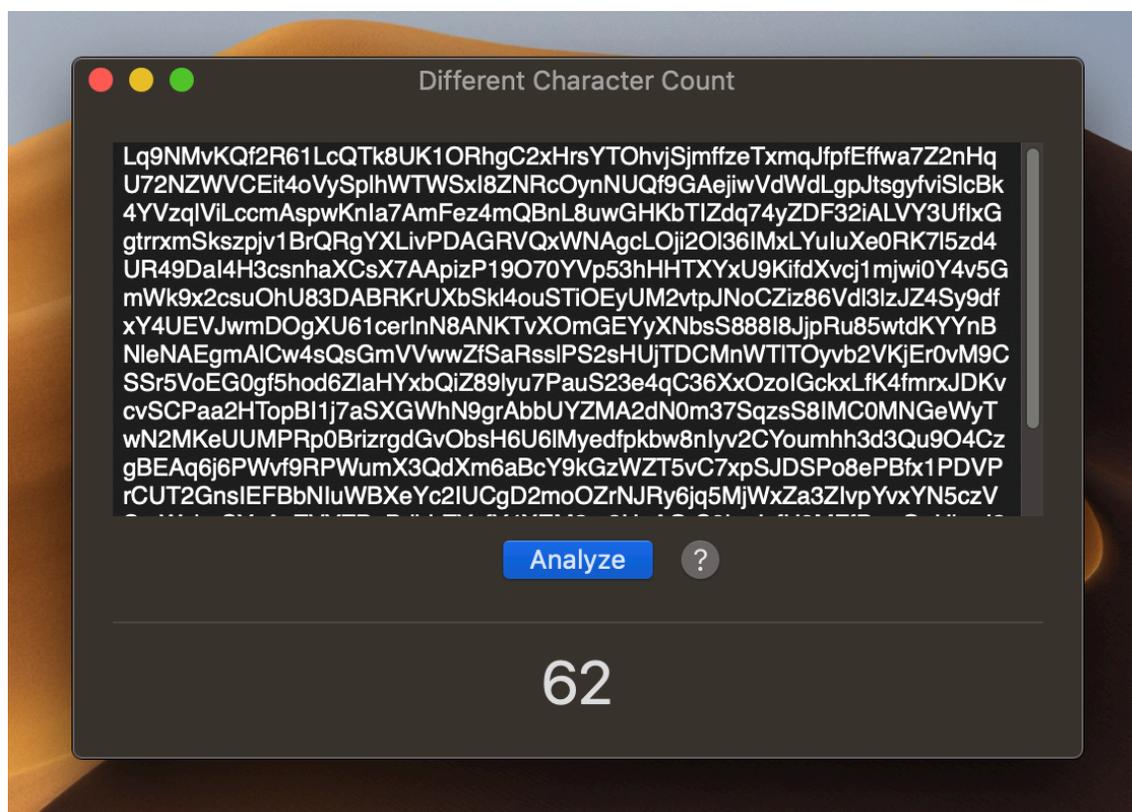
## Character List Tool

The Character List tool is a simplified version of the Character Analysis tool that is used when you only need to know what characters occur, and not necessarily how many times they do. To use the Character List tool, simply paste in the string you'd like to analyze by right clicking in the top text field, then clicking "Paste". Then click "Analyze" or press Command + Enter/Return on your keyboard.



## Different Character Count Tool

The Different Character Count Tool is an even further simplified version of the Character List tool that is used for when you only need to know how many unique characters there are in a string, and not what they are, or how many of each specific character there is. To use the Different Character Count Tool, simply paste in the string you'd like to analyze by right clicking in the text field and clicking "Paste". Then click "Analyze" or press Command + Enter/Return on your keyboard. This tool can be useful to determine the Character Sample Size value used in the Possibility Calculator tool, which you can learn more about in the Possibility Calculator Tool section below.



## Possibility Calculator Tool

The Possibility Calculator tool is used to quickly tell how many possible outcomes there are for a given string length, and input character sample size. For example, if you had a 3 character string that used only lower case letters (an input character sample size of 26), there would be 17576 different possible outcomes.

