

Convert Text to Speech in Python

There are several APIs available to convert text to speech in python. One of such APIs is the google text to speech API commonly known as gTTS API. gTTS is a very easy to use tool which converts the text entered, into audio which can be saved as a mp3 file.

The gTTS API supports several languages including, Hindi, Tamil, French, German and many more. The speech can be delivered in any one of the two available audio speeds, fast or slow.

However, as the latest update, it is not possible to change the voice of the generated audio.

Requirements

Python

Python Module gTTS

Python Module OS

Where you have to install all these softwares.

Python

Python is a widely used high-level programming language. To write and execute code in python, we first need to install Python on our system.

Installing Python on Windows takes a series of few easy steps.

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Step 1 – Select Version of Python to Install

Python has various versions available with differences between the syntax and working of different versions of the language. We need to choose the version which we want to use or need. There are different versions of Python 2 and Python 3 available.

Step 2 – Download Python Executable Installer

On the web browser, in the official site of python (www.python.org), move to the Download for Windows section.

All the available versions of Python will be listed. Select the version required by you and click on Download. Let suppose, we chose the Python 3.9.1 version.

Looking for a specific release?

Python releases by version number:

Release version	Release date		Click for more
Python 3.8.7	Dec. 21, 2020	Download	Release Notes
Python 3.9.1	Dec. 7, 2020	Download	Release Notes
Python 3.9.0	Oct. 5, 2020	Download	Release Notes
Python 3.8.6	Sept. 24, 2020	Download	Release Notes
Python 3.8.10	Sept. 5, 2020	Download	Release Notes
Python 3.7.9	Aug. 17, 2020	Download	Release Notes
Python 3.6.12	Aug. 17, 2020	Download	Release Notes
Python 3.8.5	July 26, 2020	Download	Release Notes

[View older releases](#)

On clicking download, various available executable installers shall be visible with different operating system specifications. Choose the installer which suits your system operating system and download the installer. Let suppose, we select the Windows installer(64 bits).

The download size is less than 30MB.

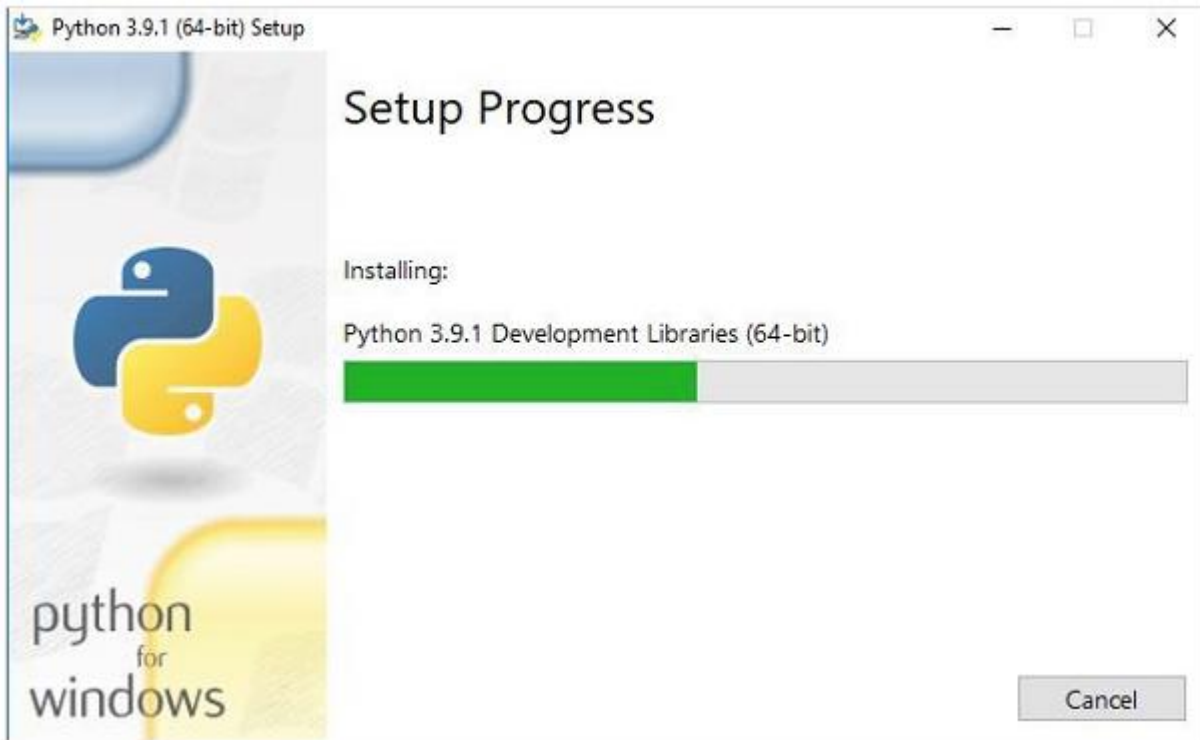
Step 3 – Run Executable Installer

We downloaded the Python 3.9.1 Windows 64 bit installer.

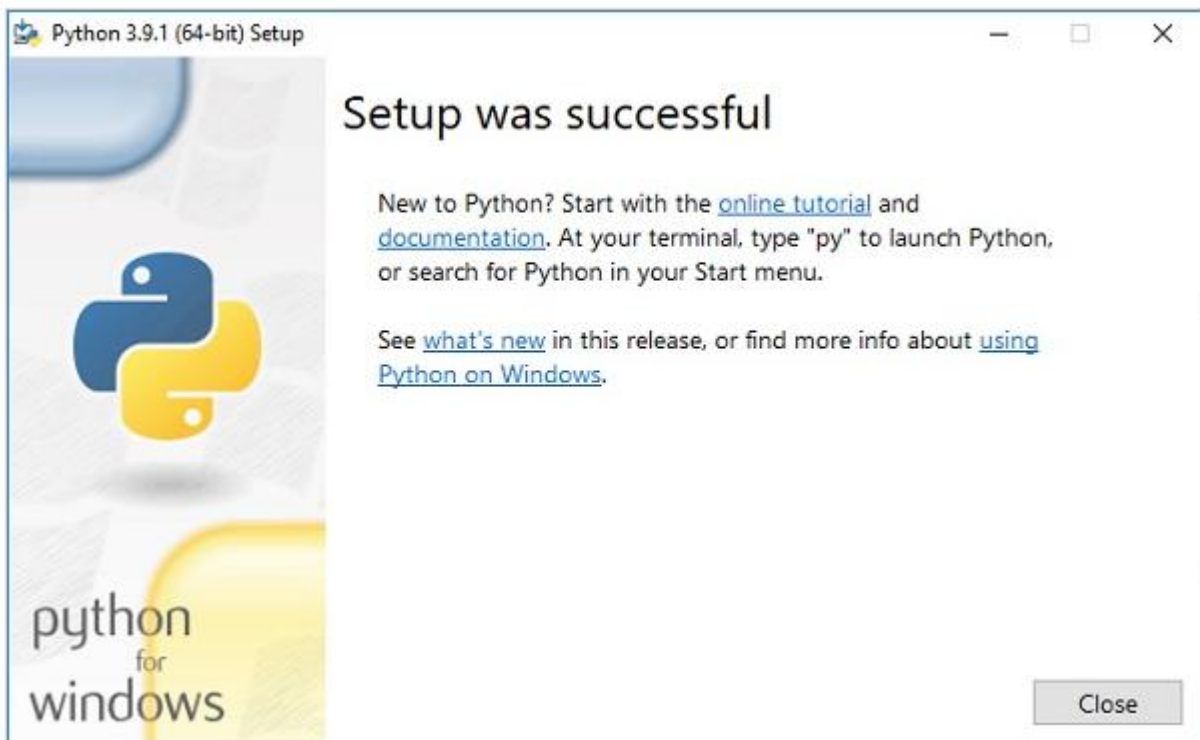
Run the installer. Make sure to select both the checkboxes at the bottom and then click Install New.



On clicking the Install Now, The installation process starts.



The installation process will take few minutes to complete and once the installation is successful, the following screen is displayed.



Step 4 – Verify Python is installed on Windows

To ensure if Python is successfully installed on your system. Follow the given steps –

- Open the command prompt.
- Type 'python' and press enter.
- The version of the python which you have installed will be displayed if the python is successfully installed on your windows.

```
Command Prompt - python
Microsoft Windows [Version 10.0.17134.1304]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Inderjit Singh>python
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> _
```

Step 5 – Verify Pip was installed

Pip is a powerful package management system for Python software packages. Thus, make sure that you have it installed.

To verify if pip was installed, follow the given steps –

- Open the command prompt.
- Enter `pip -V` to check if pip was installed.
- The following output appears if pip is installed successfully.

```
Command Prompt
Microsoft Windows [Version 10.0.17134.1304]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Inderjit Singh>pip -V
pip 20.2.3 from c:\users\inderjit singh\appdata\local\programs\python\python39\lib\site-packages\pip (python 3.9)

C:\Users\Inderjit Singh>
```

We have successfully installed python and pip on our Windows system.

gTTS

Install gTTS

gTTS(Google Text-to-speech) is a python library and cli tool to interface with Google Translate text-to-speech API.. save function allow us to save the converted speech in a format that allows us to play sounds. I have saved it in a file in a format of mp3.

For all this we need a python library called gTTS. We can Install gTTS in pip install way.

```
C:\Users\Rohit Sharma>pip install gTTS
Requirement already satisfied: gTTS in c:\users\rohit sharma\anaconda3\lib\site-packages (2.2.3)
Requirement already satisfied: click in c:\users\rohit sharma\anaconda3\lib\site-packages (from gTTS) (8.0.3)
Requirement already satisfied: six in c:\users\rohit sharma\anaconda3\lib\site-packages (from gTTS) (1.16.0)
Requirement already satisfied: requests in c:\users\rohit sharma\anaconda3\lib\site-packages (from gTTS) (2.27.1)
Requirement already satisfied: colorama in c:\users\rohit sharma\anaconda3\lib\site-packages (from click->gTTS) (0.4.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\rohit sharma\anaconda3\lib\site-packages (from requests->gTTS) (2021.10.8)
Requirement already satisfied: charset-normalizer~=2.0.0 in c:\users\rohit sharma\anaconda3\lib\site-packages (from requests->gTTS) (2.0.4)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\rohit sharma\anaconda3\lib\site-packages (from requests->gTTS) (1.26.7)
Requirement already satisfied: idna<4,>=2.5 in c:\users\rohit sharma\anaconda3\lib\site-packages (from requests->gTTS) (3.2)
```

Python OS Module

The OS module in python provides functions for interacting with the operating system. OS comes under Python's standard utility modules. This module provides a portable way of using operating system-dependent functionality.

The `*os*` and `*os.path*` modules include many functions to interact with the file system.

Deployment

Make a file name `app.py` where I had typed the code of this program for text to speech.

```
# Import the required module for text
# to speech conversion
from gtts import gTTS

# This module is imported so that we can
# play the converted audio
import os

# The text that you want to convert to audio
mytext = 'Welcome to aravali college of engineering and management, I am Rohit Sharma from Btech Semester third'

# Language in which you want to convert
language = 'en'

# Passing the text and language to the engine,
# here we have marked slow=False. Which tells
# the module that the converted audio should
# have a high speed
myobj = gTTS(text=mytext, lang=language, slow=False)

# Saving the converted audio in a mp3 file named
# welcome
myobj.save("welcome.mp3")

os.system(["welcome.mp3"])
```

Output

The output of the above program should be a Voice saying, 'Welcome to aravali college of engineering and management, I am Rohti Sharma from Btech Semester Third !'