

# Twilio Documentation for MPDV Office and Shopfloor Application

## Project Scope

This project involves the implementation of new features for the office automation system based on biometric authentication:

- Automation of adding Hydra system personnel into FaceSec device when syncing.
- Sending an error notification message to recipient's email and SMS in syncing data between the FaceSec Device and the HYDRA server

Compare_office.py	Code to sync the data of the hydra system and
Compare_office_notification.py	FaceSec device to add all personnel that is from the hydra system to FaceSec device
Main_office.py	Same code as Compare_office but it has a notification feature which sends out error messages in the form of SMS and Email messages when there are errors in synchronization.
Client_office.py	Main code to run so the Logon to the dashboard and synchronization of the hydra system and FaceSec device
	Code to run to enable to receive request to logon to the dashboard of the user who scan face

<p>Compare_shopfloor.py</p> <p>Compare_shopfloor_notification.py</p>	<p>Code to sync the data of the hydra system and FaceSec device to add all personnel that is from the hydra system to FaceSec device</p> <p>Same code as Compare_shopfloor but it has a notification feature which sends out error messages in the form of SMS and Email messages when there are errors in synchronization.</p>
<p>Main_shopfloor.py</p>	<p>Code to run to input ID number with number of workers into the hydra system when scanning face</p>

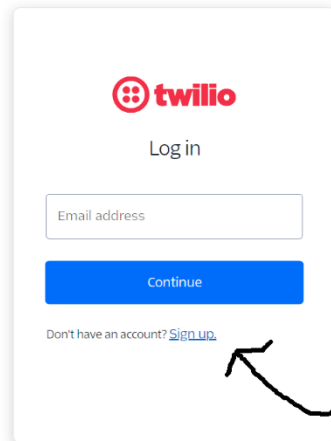
## Setting up Twilio API (SMS Notification):

### Creating a new Twilio Account:

1. Go to the Twilio main webpage: <https://www.twilio.com/en-us> and click on "Login" at the top right corner of the webpage.

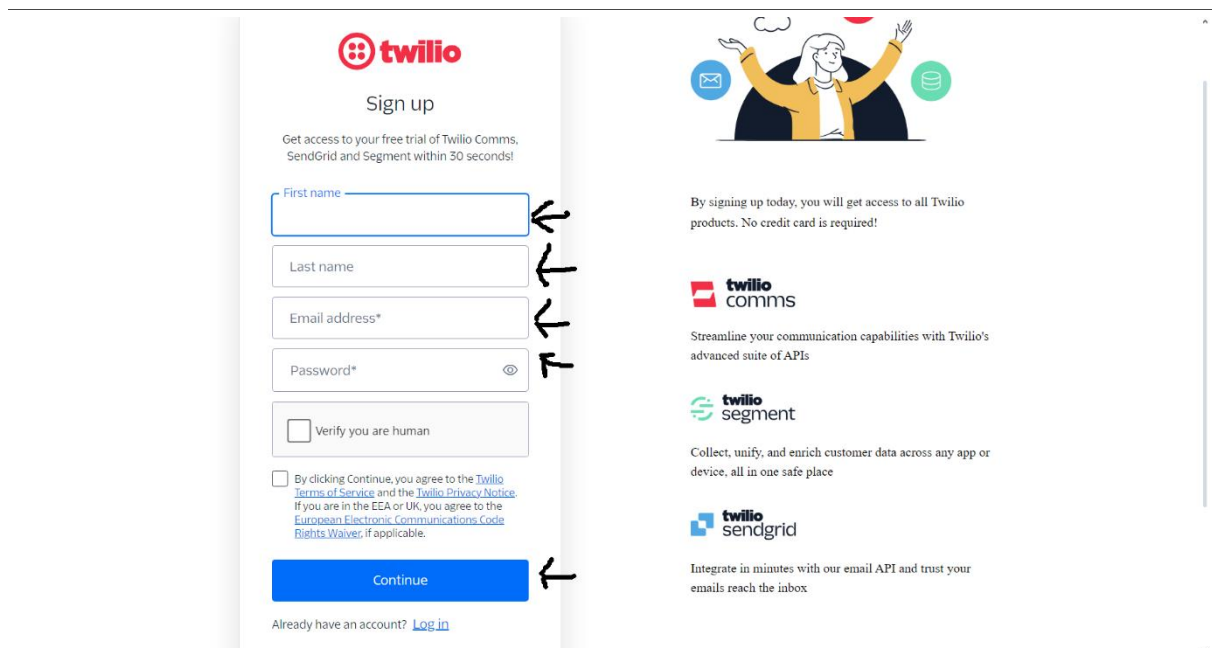
The screenshot shows the Twilio website homepage. At the top right, there are links for "English", "Support", and "Login". Below these, there is a navigation bar with "Products", "Solutions", "Developers", "Why Twilio", and "Pricing". A search icon and "Contact sales" button are also present. The main hero section features the Twilio logo and a headline: "Gartner names Twilio a Leader in CPaaS for the second time". Below the headline is a sub-headline: "The 2024 Gartner® Magic Quadrant™ for CPaaS recognizes Twilio's ability to execute and completeness of vision." and a "Read the report" button. On the right side of the hero section, there is a Gartner Magic Quadrant chart for Communications Platform as a Service (CPaaS). A red circle highlights the "Start for free" button in the top right corner, and a red arrow points to it with the word "click" written in red next to it.

2. In the page, click on “Sign Up” and fill in your email, name and password and verify the email (School Email is recommended) and choose the free trial of the account to set up your account.



The image shows the Twilio login page. At the top is the Twilio logo. Below it is the text "Log in". There is a text input field labeled "Email address". Below the input field is a blue button labeled "Continue". At the bottom, there is a link that says "Don't have an account? [Sign up.](#)". A hand-drawn black arrow points from the "Sign up." link towards the bottom right of the page.

[Terms of Service](#) | [Privacy Policy](#)  
© 2024 Twilio Inc. all rights reserved.



The image shows the Twilio sign up page. At the top is the Twilio logo. Below it is the text "Sign up". Underneath is a sub-header: "Get access to your free trial of Twilio Comms, SendGrid and Segment within 30 seconds!". There are four text input fields: "First name", "Last name", "Email address\*", and "Password\*" (with an eye icon for toggling visibility). Below these is a checkbox labeled "Verify you are human". Underneath the checkbox is a paragraph of terms and conditions: "By clicking Continue, you agree to the [Twilio Terms of Service](#) and the [Twilio Privacy Notice](#). If you are in the EEA or UK, you agree to the [European Electronic Communications Code Rights Waiver](#), if applicable." Below this is a blue button labeled "Continue". At the bottom, there is a link: "Already have an account? [Log in](#)". On the right side of the page, there is an illustration of a person with arms raised, surrounded by icons for email, a database, and a document. Below the illustration, there is text: "By signing up today, you will get access to all Twilio products. No credit card is required!". Below this text are three product cards: "twilio comms" (Streamline your communication capabilities with Twilio's advanced suite of APIs), "twilio segment" (Collect, unify, and enrich customer data across any app or device, all in one safe place), and "twilio sendgrid" (Integrate in minutes with our email API and trust your emails reach the inbox). There are four hand-drawn black arrows pointing to the "First name", "Last name", "Email address\*", and "Continue" fields.

### Getting Twilio Phone Number:

1. After signing up, you will go into the Twilio Console. Go to the left side of the webpage and click on “# Phone Numbers”, “Manage”, and then “Buy a

number” to start buying a number.

The screenshot shows the Twilio Account Dashboard. On the left sidebar, under 'Phone Numbers', the 'Manage' sub-menu is expanded, and the 'Buy a number' option is highlighted with a red arrow. The main content area displays 'Step 1: Get a Twilio phone number' with instructions on how to get started. It mentions that the trial includes one US 10DLC phone number and lists some capabilities. A 'Next' button is visible at the bottom right of the main content area.

2. After that, you can choose a suitable number that you can use. The selected phone number will be placed in the console after you got it.

The screenshot shows the Twilio console's 'Buy a number' page. At the top, there's a search bar with the text 'Search by digits or phrases'. Below it, a table lists available phone numbers. A notification banner at the top of the table reads 'Sending OTP or 2FA? Skip wait times, let us handle compliance, and launch globally on day 1 with Verify. Learn more about Verify →'. The table has columns for Number, Type, Capabilities (Voice, SMS, MMS, Fax), Address Requirement, and Monthly fee. The first four rows show local numbers for Pinckneyville, IL US; Central City, PA US; Ewing, MO US; and Martinsburg, MO US, all with a monthly fee of \$1.15 and a 'Buy' button.

Number	Type	Capabilities				Address Requirement	Monthly fee	
		Voice	SMS	MMS	Fax			
+1 618 361 4861 ▲ Pinckneyville, IL US	Local	📞	💬	💬	📠	None	\$1.15	Buy
+1 814 985 0298 ▲ Central City, PA US	Local	📞	💬	💬	📠	None	\$1.15	Buy
+1 573 494 6174 ▲ Ewing, MO US	Local	📞	💬	💬	📠	None	\$1.15	Buy
+1 573 492 3752 ▲ Martinsburg, MO US	Local	📞	💬	💬	📠	None	\$1.15	Buy

Getting Twilio Account SID and Token:

1. Go back to Twilio Home and scroll down until you find account info. Then copy the Account SID, Authentication Token and Token to use them later.

▼ Account Info

Account SID

Auth Token

Show

⚠ Always store your token securely to protect your account. [Learn more](#)

My Twilio phone number

You are in a trial account and can only send messages and make calls to [verified phone numbers](#). [Learn more about your trial account](#)

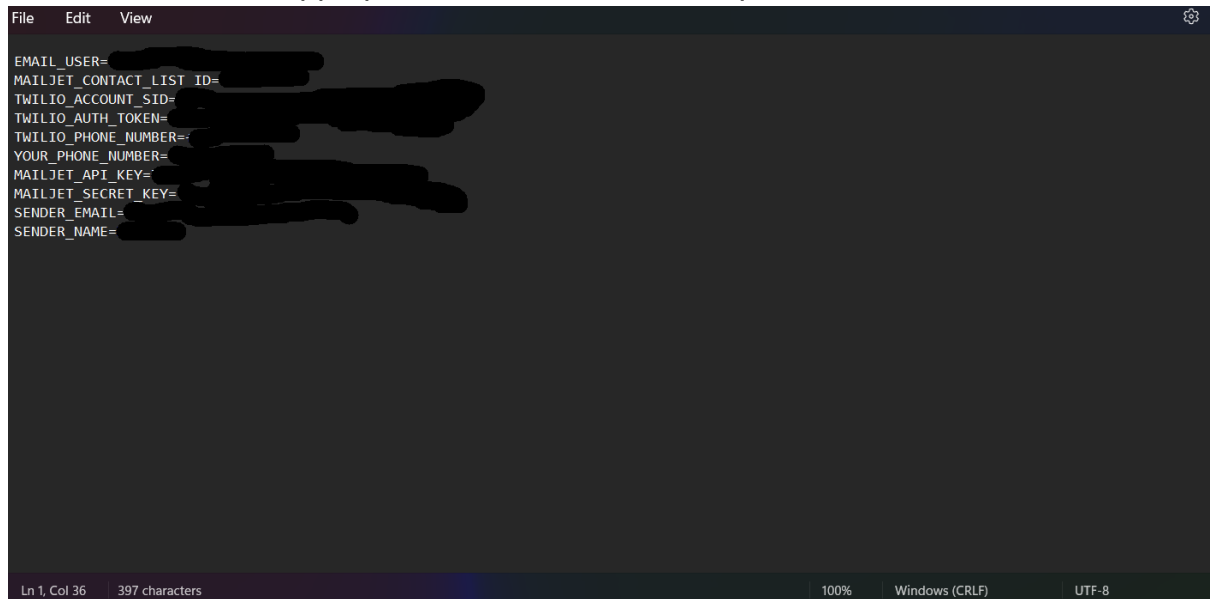
**COPY**

Putting in environment details to be used in the code:

1. Open the folder containing the .env file inside the main folder:

Name	Status	Date modified	Type	Size
__pycache__	✓	7/8/2024 4:13 pm	File folder	
.env	✓	8/8/2024 5:23 pm	ENV File	1 KB
Compare_office.py	✓	7/8/2024 4:11 pm	Python Source File	10 KB
Compare_office_notification.py	✓	8/8/2024 5:21 pm	Python Source File	21 KB
Main_office.py	✓	6/8/2024 1:11 pm	Python Source File	3 KB

2. After that, fill in the appropriate variables in the notepad:



The screenshot shows a Notepad window with a dark theme. The menu bar at the top includes 'File', 'Edit', and 'View'. The text content consists of several lines of environment variables, each followed by a redacted value (represented by black bars). The variables are: EMAIL\_USER=, MAILJET\_CONTACT\_LIST\_ID=, TWILIO\_ACCOUNT\_SID=, TWILIO\_AUTH\_TOKEN=, TWILIO\_PHONE\_NUMBER=, YOUR\_PHONE\_NUMBER=, MAILJET\_API\_KEY=, MAILJET\_SECRET\_KEY=, SENDER\_EMAIL=, and SENDER\_NAME=. The status bar at the bottom indicates 'Ln 1, Col 36', '397 characters', '100%', 'Windows (CRLF)', and 'UTF-8'.

```
EMAIL_USER=  
MAILJET_CONTACT_LIST_ID=  
TWILIO_ACCOUNT_SID=  
TWILIO_AUTH_TOKEN=  
TWILIO_PHONE_NUMBER=  
YOUR_PHONE_NUMBER=  
MAILJET_API_KEY=  
MAILJET_SECRET_KEY=  
SENDER_EMAIL=  
SENDER_NAME=
```

- a. TWILIO\_ACCOUNT\_SID: Your account SID from Twilio console
- b. TWILIO\_AUTH\_TOKEN: Your account Authentication token from Twilio console
- c. TWILIO\_PHONE\_NUMBER: Your Twilio Phone number, must put country code inside the number as well as phone number and no spaces (eg. +121234567)
- d. YOUR\_PHONE\_NUMBER: Your own/recipient's phone number, must put country code inside the number as well as phone number and no spaces (eg. +651234567)

**Finally, open the office and shopfloor codes and open a new terminal, then you key in this to install the Twilio library:**

**pip install twilio**