

## CFG Advanced Python Course - Session 5 (Autumn 2015)

### Using external APIs

#### APIs

APIs are of vital importance to developers; they enable you to programmatically access data from various different services such as Twitter, Facebook and Spotify to name a few. APIs enable you to create applications powered by data from any service of your liking.

#### Mandrill

When building a website, for example a landing page for what is to come, one vital thing to do is capture the details of people that might be interested in what you are going to launch.

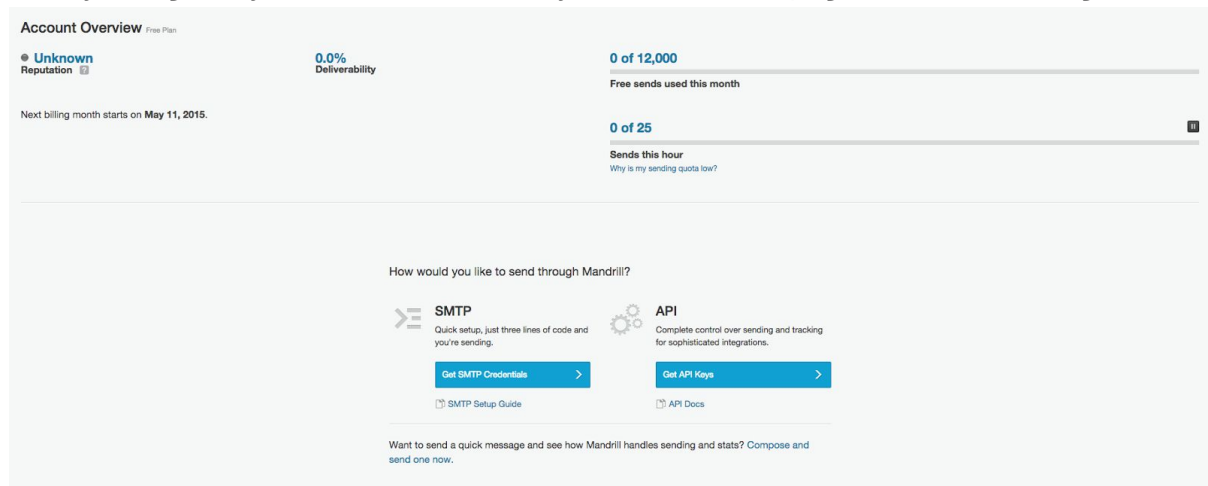
Most importantly, you want to capture their email address so you can communicate things to them. In this session we will learn how to capture a user's e-mail address (and any other details for that matter) and programmatically send them an email to confirm that they have signed up to your awesome website's newsletter!

This will be an interactive session based on what we did in **Session 3**. If you look at what we did during that session under the **GET & POST** section, you will see that we already learnt how to capture a user's name and e-mail and print it out on our terminal. Now we are going to use that data to send an e-mail.

We will be using [Mandrill](#), an email infrastructure service - or in simpler terms, a service that enables you to programmatically send e-mails. Mandrill has a Python library that makes it easy to send e-mails, so go ahead and head over to their [Python documentation](#) and follow the instructions on how to install the Python client and get started.

You should all already have a Mandrill account, as this was your homework from last session. If not, go ahead and create an account. If you get an error message like 'too many people are trying to create an account from the same location', then wait a little bit; this is Mandrill's way to safeguard against spammers creating accounts programmatically to send spam e-mail.

Once you log into your Mandrill account, you should see a page like the following:



Hurray, Mandrill is giving us **12,000 free emails per month!**

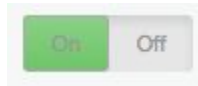
In order to programmatically send e-mails, we need to get an API guy, so go ahead and click on **Get API Keys**. On the next page that you are presented with, click on **+ New API Key**. You should see a simple form like this:

The screenshot shows the 'API Keys' form. It has a title 'API Keys' and a section 'Description' with a text input field containing 'Send e-mails!'. Below the input field, there's a note: 'Adding a description to your API key will allow you to filter activity by the key.' There are three checkboxes: 'Only Allow The Key To Work From Certain IP Addresses', 'Only Allow This Key To Use Certain API Calls', and 'Test Key ?'. At the bottom, there are two buttons: 'Create API Key' (in blue) and 'Cancel' (in grey).

Add a description to make it easier to track your API Keys and leave the rest of the boxes unchecked.

You might wonder, why would you ever want to create multiple API Keys. This is especially useful when your website grows and you start sending e-mails for different functions; registration emails, newsletters etc. In those cases, you would want to use a different API Key for each function to make life easier when managing what each component does.

After adding a description, hit **Create API Key** - you should now see a key listed! You will notice that there is a little On/Off toggle to the right of the key - ensure that is **On**:



If you now go back to [Mandrill's Python documentation](#), you can see instructions on how to use the library - to authenticate yourself with Mandrill via Python this is as simple as writing two lines of code:

```
import mandrill
mandrill_client = mandrill.Mandrill('YOUR_API_KEY')
```

Next up, we want to actually send an e-mail, so we can look at the [this](#) part of the documentation which you can access from the left hand side of the Python documentation. The most minimal way to send an e-mail would be the following:

```
import mandrill

mandrill_client = mandrill.Mandrill('YOUR_API_KEY')

message = {
    'from_email': 'hello@example.com',
    'from_name': 'Your Name Goes Here',
    'html': '<p>Thanks for signing up to our awesome newsletter!</p>',
    'subject': 'Welcome!',
    'to': [
        {
            'email': 'some.email@example.com',
            'name': 'Recipients Name Goes Here',
            'type': 'to'
        }
    ]
}

mandrill_client.messages.send(
    message=message,
    async=False,
)
```

This example is completely independent from a Flask app, so what you should do now is figure out how to apply the above code in the context of your Flask app that we created over the past few sessions.

Ensure that you are sending an email to a valid email address, set your own e-mail address as the **from\_email** and use the email and name submitted via the form that we were previously printing.

Read through the documentation and figure out what other things you can do with Mandrill - Can you send an email to multiple recipients? Can you add attachments?