

TEST YOUR INSTALLATION

Mac:

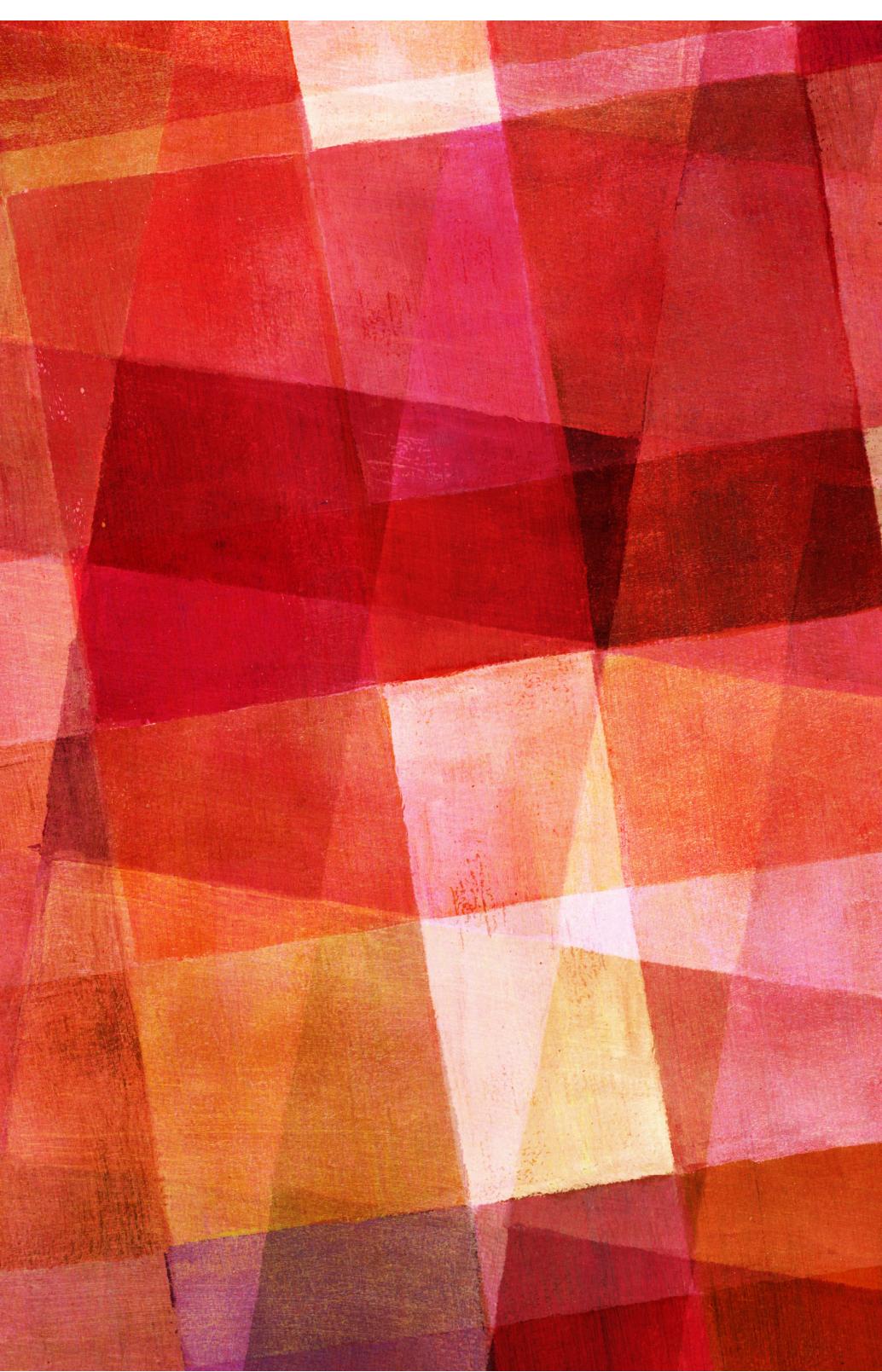
1. Search (upper-right) for:
Terminal.app
2. Type: **python —version**
3. (There are 2 dashes before
“version”)

Windows PC:

1. Go to: Start Menu -> Anaconda folder -> Anaconda Prompt
2. Type: **python —version**
3. (There are 2 dashes before
“version”)

1. Type: **conda —version**
2. Type: **conda install -c esri arcgis**
3. (There is 1 dash in line 2 above.)

INTRODUCTION TO PYTHON FOR EDUCATORS



WORKSHOP GOALS:

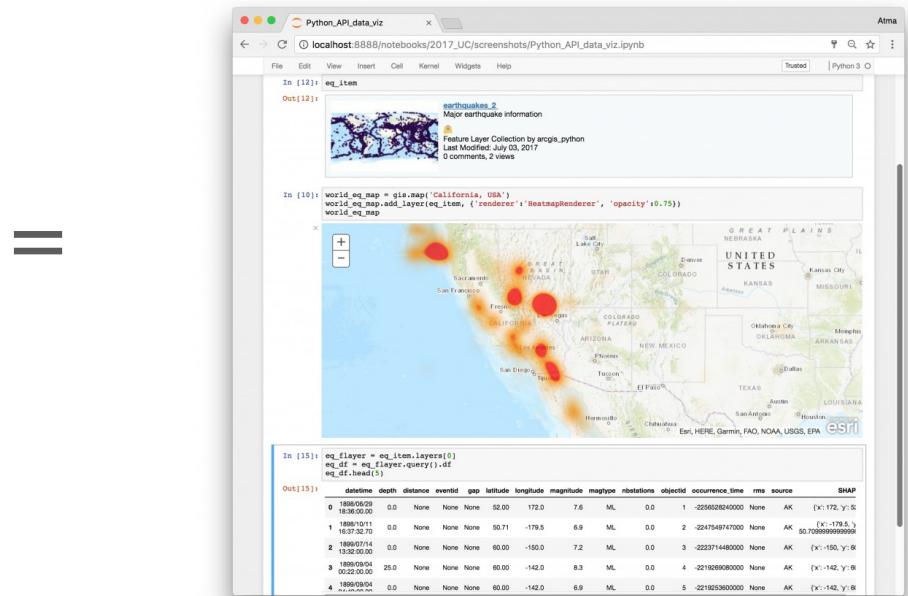
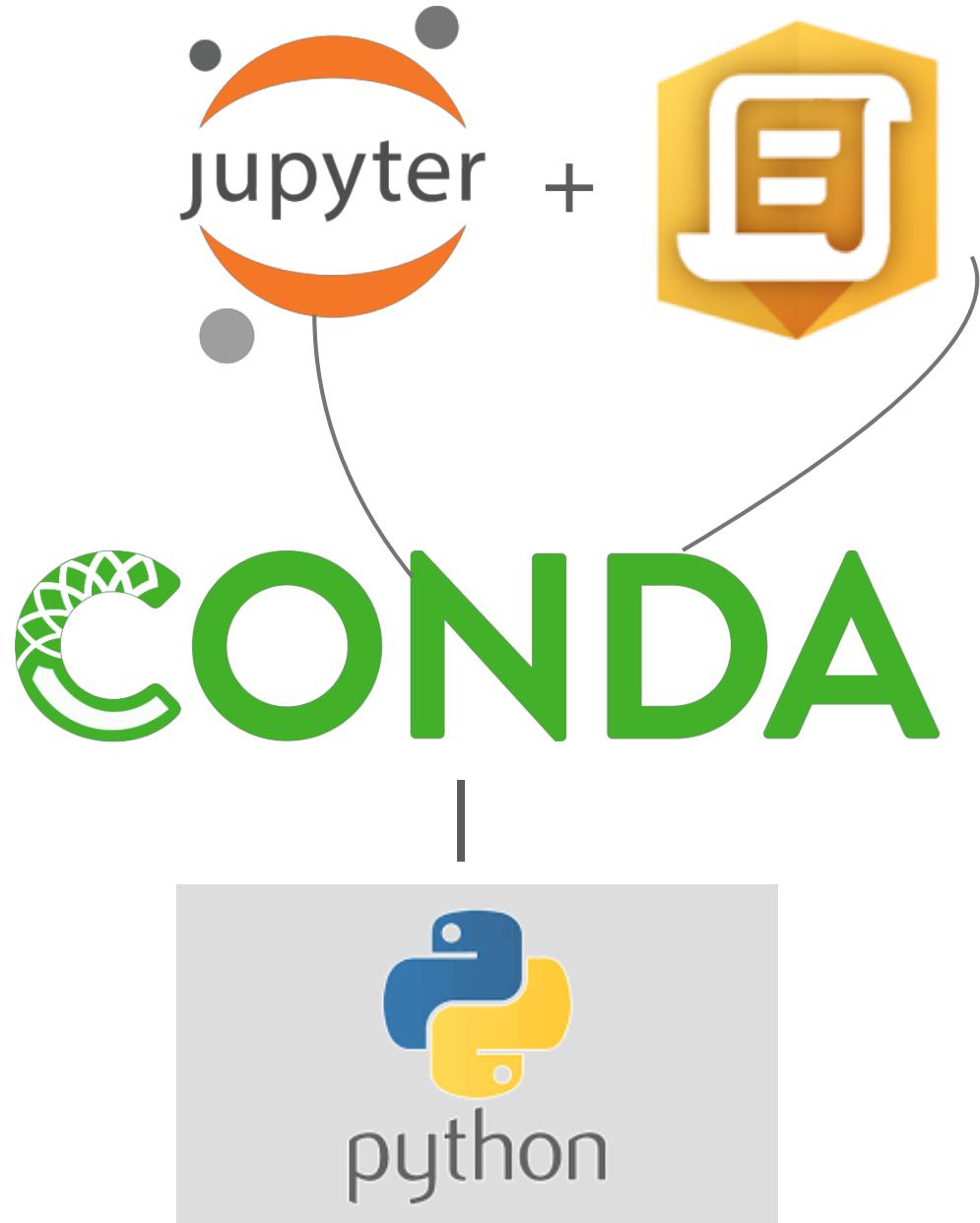
- Install Python/ArcGIS “stack” on your computer
- Have a basic understanding of the major pieces:
 - Python
 - Anaconda/Conda
 - Jupyter notebooks
 - ArcGIS API for Python
- Run pre-built scripts
- Make a simple script



WHAT YOU WILL NOT LEARN:

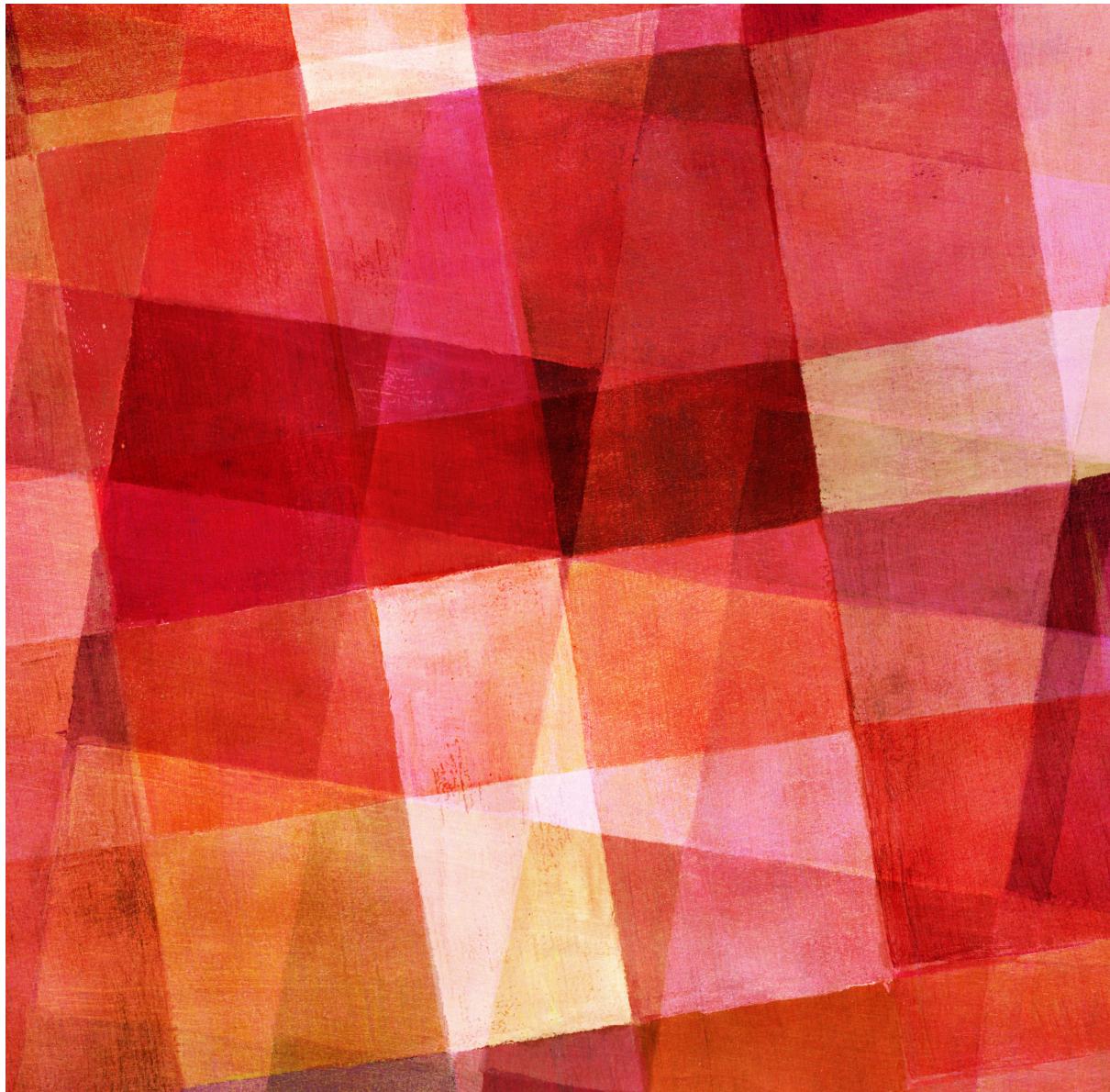
- The Python language
- 99% of the ArcGIS API
- ArcPy

ANATOMY

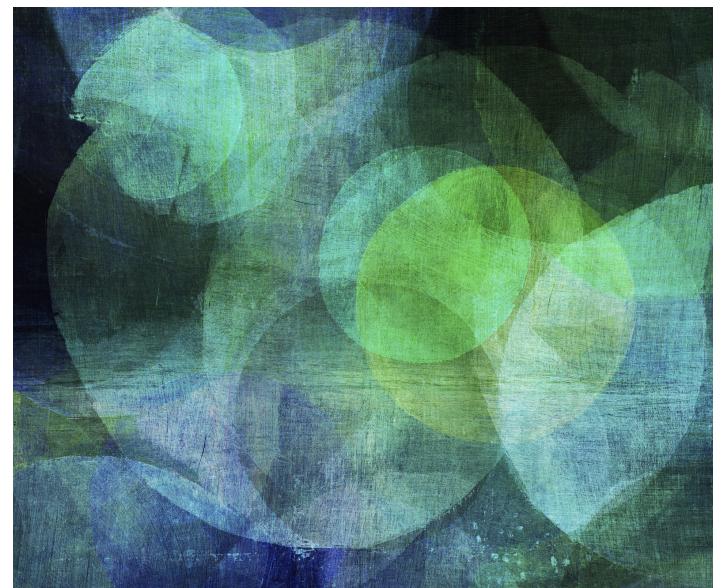


WHY USE PYTHON AND ARCGIS?

- Automation and batching
 - Org management
 - Map analytics
 - Map/data publication/management
- Data science
 - big data
 - mixed methods analyses
- Coding/Computational science classrooms
 - integrate mapping w code



BEFORE
TONIGHT

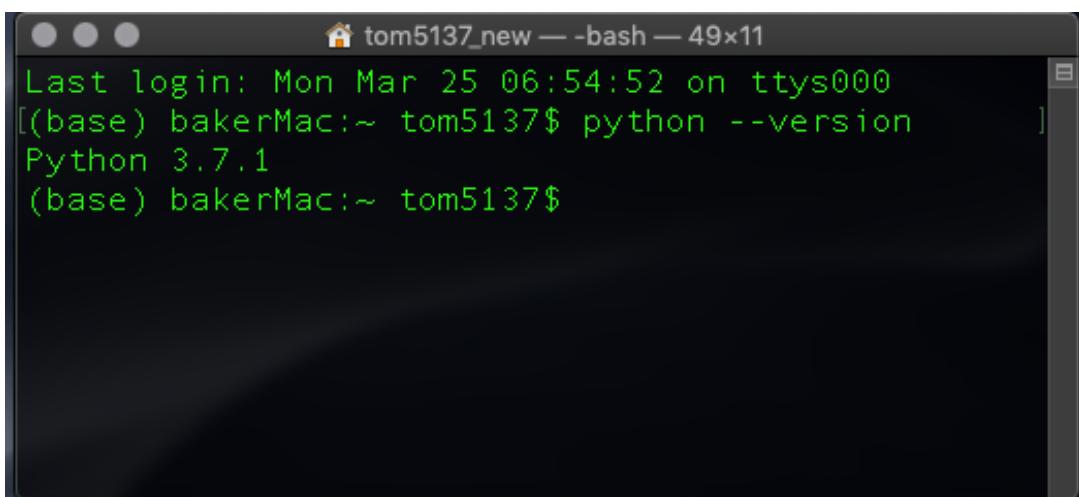


DOWNLOAD & INSTALL ANACONDA

TEST YOUR INSTALLATION

Mac:

1. Search (upper-right) for:
Terminal.app
 2. Type: **python —version**
 3. (There are 2 dashes before
“version”)
-



```
tom5137_new └─ bash └─ 49x11
Last login: Mon Mar 25 06:54:52 on ttys000
(base) bakerMac:~ tom5137$ python --version
Python 3.7.1
(base) bakerMac:~ tom5137$
```

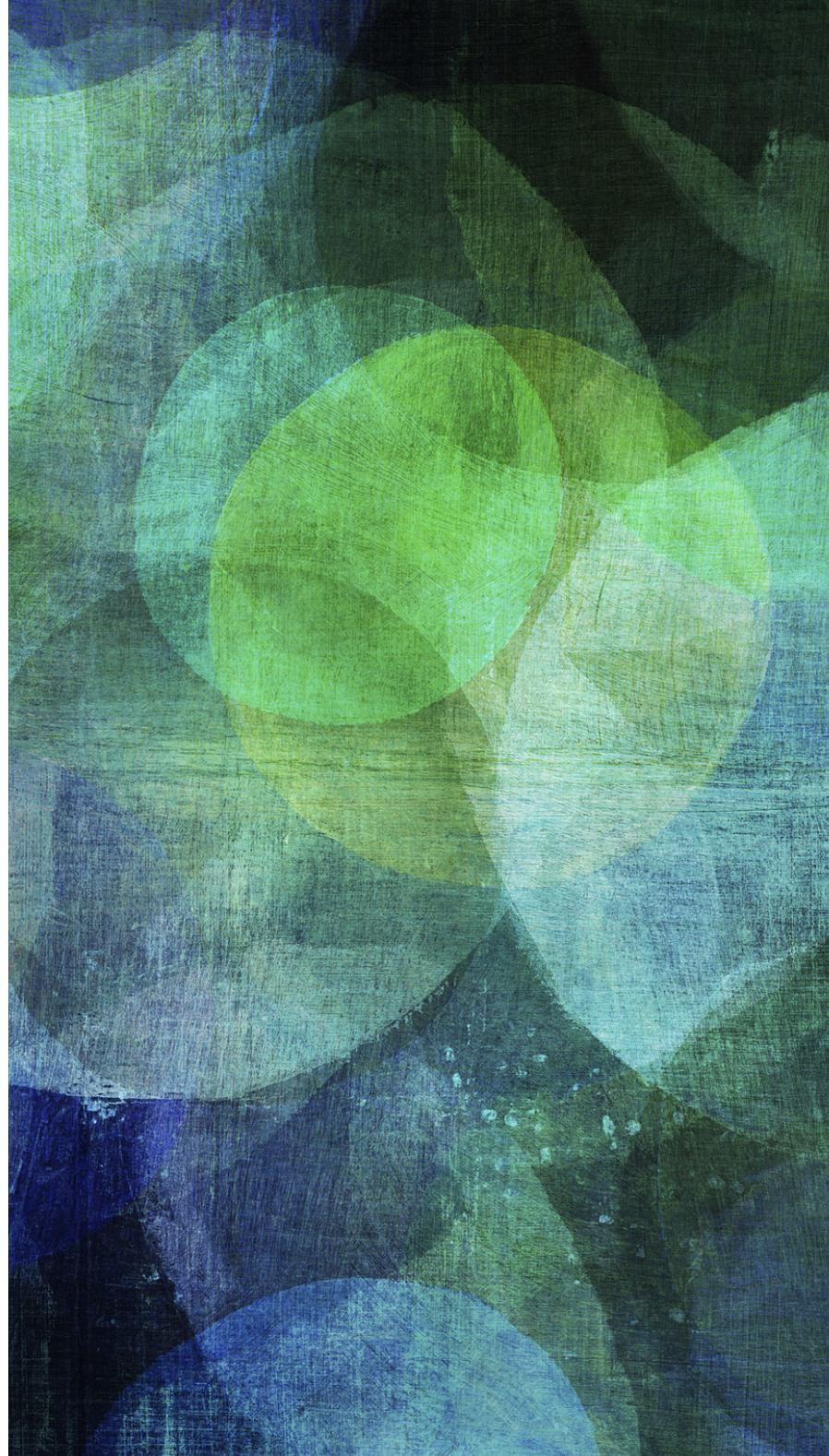
Windows PC:

1. Go to: Start Menu -> Anaconda folder -> Anaconda Prompt
 2. Type: **python —version**
 3. (There are 2 dashes before
“version”)
-

Extension:

1. Type: **conda —version**

INSTALL ARCGIS API



INSTALL THE ARCGIS API FOR PYTHON

Mac:

1. In Terminal,
2. Type: `conda install -c esri arcgis`
3. (There is 1 dash before “c”)

Windows PC:

1. In the Anaconda Prompt,
2. Type: `conda install -c esri arcgis`
3. (There is 1 dash before “c”)

Notes:

1. Often dependent libraries must be installed or updated in order to install a library.

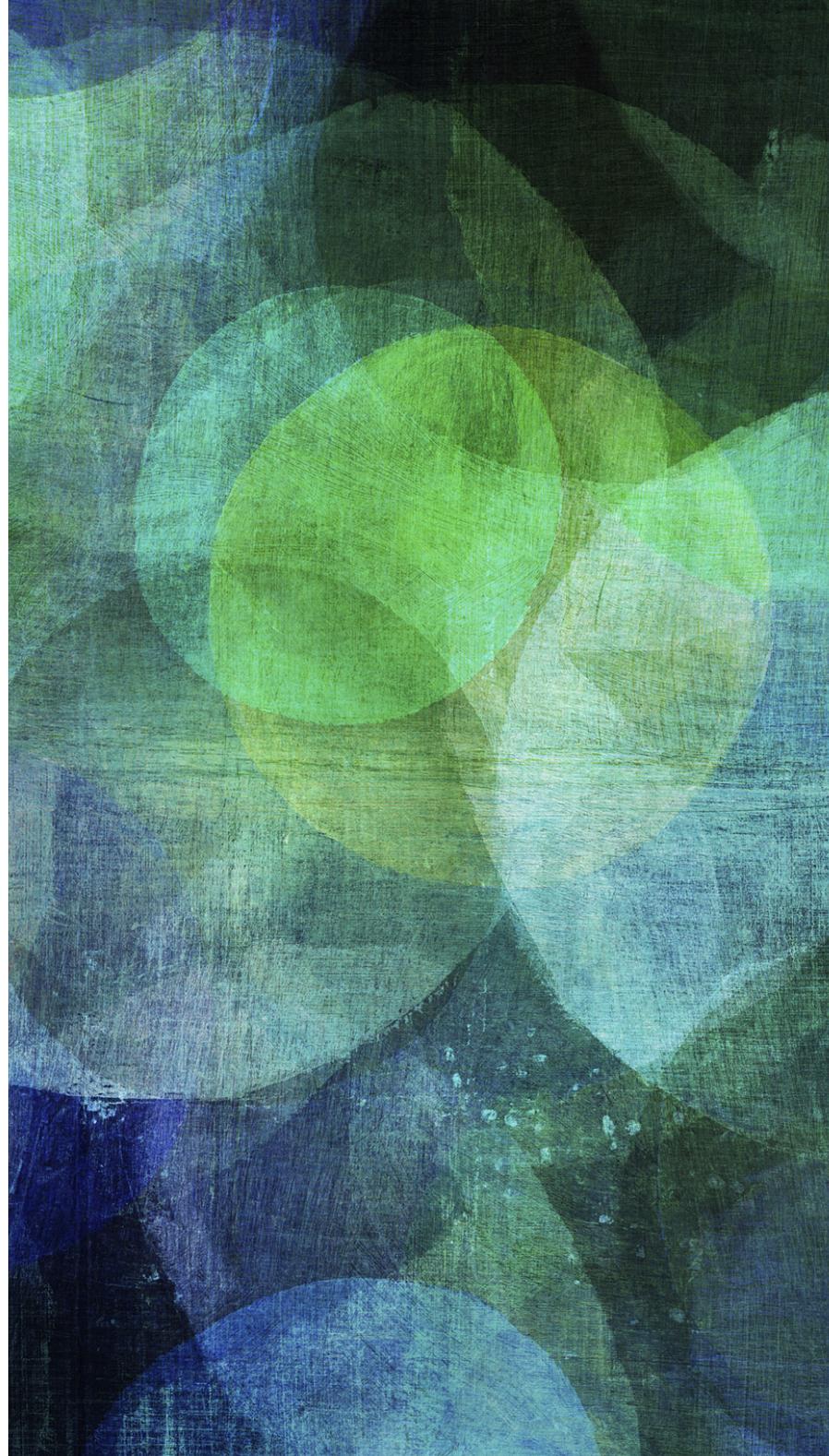
Windows error?

1. Permission errors? Right-click the Anaconda Prompt icon and check “Run as Administrator”

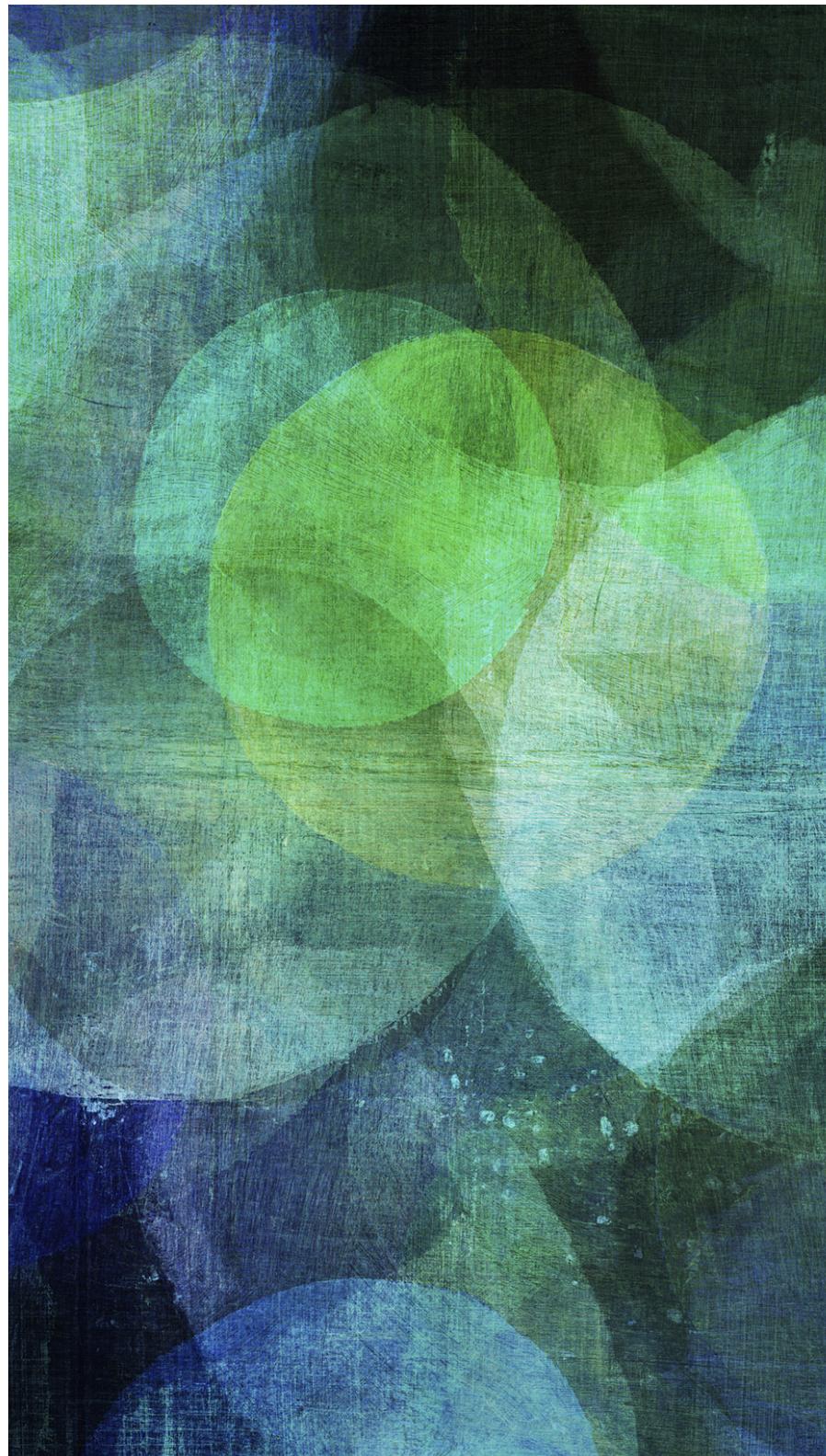
START JUPYTER NOTEBOOK

change directory -> cd\

start it -> jupyter notebook



MAKE A MAP



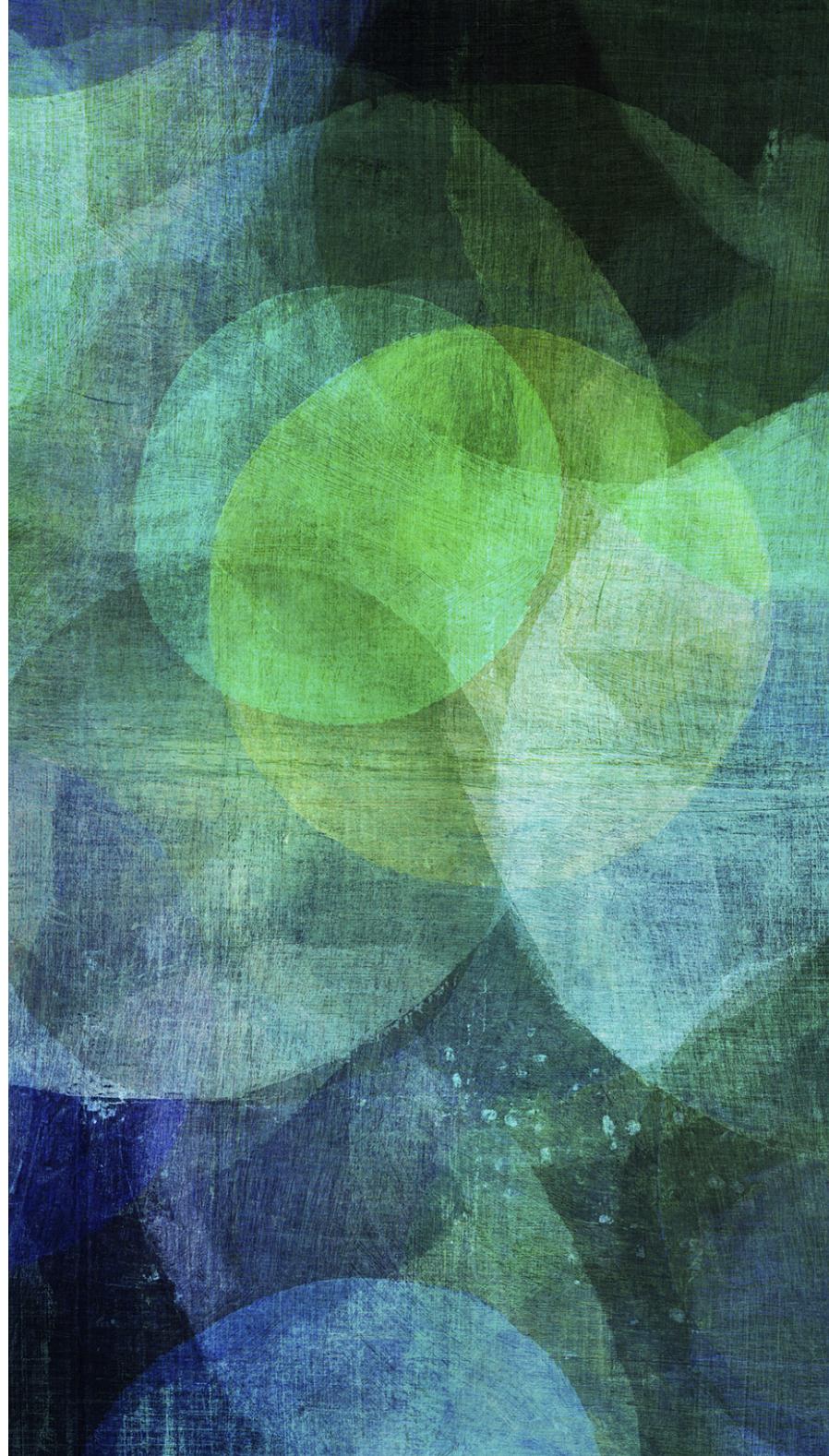
OUR FIRST PYTHON MAP – CODE IS CASE-SENSITIVE

```
from arcgis.gis import GIS  
gis=GIS()  
map1 =gis.map("Palm Springs, CA")  
map1
```

Extension: Add code:

```
new_layer = gis.content.search(query='id: 31a21c56c259495facab034a7c8b7bb4')  
map1.add_layer(new_layer)
```

QUERY PUBLIC USERS

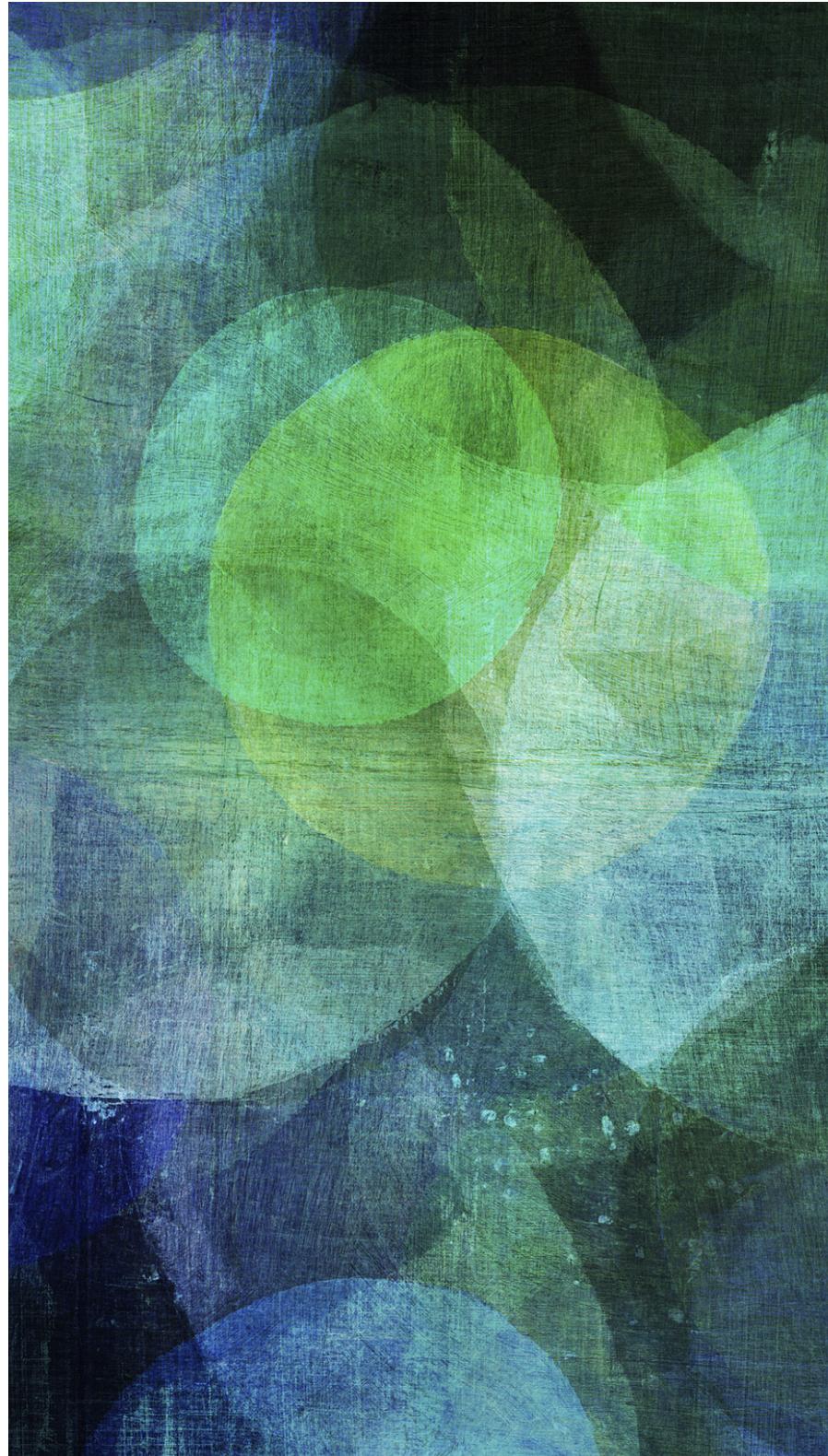


OUR SECOND PYTHON SCRIPT -

.....

```
from arcgis.gis import GIS  
gis=GIS()  
gis.users.get('mapsnrocks')
```

RUN A PRE-BUILT NOTEBOOK



RUN PRE-BUILT NOTEBOOKS: QUERY

Go to: <http://esriurl.com/PyEdu>

Download all files: “Clone or Download” -> “Download Zip”

Open 1st file: Examples of user querying in ArcGIS Online.ipynb

RUN PRE-BUILT NOTEBOOKS: CREATE AND DELETE

Open 1st file: Simple create delete users.ipynb

Give your two users different names.

<http://esriurl.com/PyEdu>

<http://python.org>

<https://developers.arcgis.com/python/>