```
In [1]: conda install pymongo
```

```
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: /Users/hanchenliu/opt/anaconda3

  added / updated specs:
    - pymongo


The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    conda-4.11.0               |   py38hecd8cb5_0        14.4 MB
    pymongo-3.12.0             |   py38h23ab428_0         1.3 MB
    ------------------------------------------------------------
                                           Total:        15.7 MB

The following NEW packages will be INSTALLED:

  pymongo            pkgs/main/osx-64::pymongo-3.12.0-py38h23ab428_0

The following packages will be UPDATED:

  conda                               4.10.3-py38hecd8cb5_0 --> 4.11.0-py38hecd8cb5_0



Downloading and Extracting Packages
pymongo-3.12.0       | 1.3 MB    | ####################################### | 100%
conda-4.11.0         | 14.4 MB   | ####################################### | 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done

Note: you may need to restart the kernel to use updated packages.
```

```
In [2]: conda install dnspython;
```

```
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: /Users/hanchenliu/opt/anaconda3

  added / updated specs:
    - dnspython


The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    dnspython-1.16.0           |           py38_0        182 KB
    ------------------------------------------------------------
                                           Total:        182 KB

The following NEW packages will be INSTALLED:

  dnspython          pkgs/main/osx-64::dnspython-1.16.0-py38_0



Downloading and Extracting Packages
dnspython-1.16.0     | 182 KB    | ####################################### | 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done

Note: you may need to restart the kernel to use updated packages.
```

```
In [13]: import pandas as pd
         import pymongo
         from pymongo import MongoClient
         import dns
         import matplotlib as mpl
         import matplotlib.pyplot as plt
```

```
In [24]: client = MongoClient('mongodb+srv://Hc_Liu8800:Olivia8800@start.c7ica.mongodb.net/myFirstDatabase?retry
         Writes=true&w=majority')
```

```
In [25]: db = client.sample_supplies
```

```
In [26]: collection = db.sales
```

```
In [27]: data = pd.DataFrame(list(db.sales.find()))
```

```
In [29]: df = pd.concat([data.drop(['customer'], axis=1), data['customer'].apply(pd.Series)], axis=1)
```

```
In [30]: df
```

Out[30]:

	_id	saleDate	items	storeLocation	couponUsed	purchaseMethod	gender	age	em⋯
0	5bd761dcae323e45a93ccfea	2017-06-22 09:54:14.185	[{'name': 'notepad', 'tags': ['office', 'writi...	Denver	False	In store	M	51	worbiduh@vowbu.⋯
1	5bd761dcae323e45a93ccff5	2015-11-15 18:08:12.414	[{'name': 'laptop', 'tags': ['electronics', 's...	Seattle	False	Online	M	55	eja@ko.⋯
2	5bd761dcae323e45a93cd001	2017-02-09 12:08:51.353	[{'name': 'printer paper', 'tags': ['office', ...	Denver	False	In store	M	48	avwa@ud.⋯
3	5bd761dcae323e45a93cd01c	2016-01-19 20:06:31.410	[{'name': 'notepad', 'tags': ['office', 'writi...	Austin	False	In store	F	29	gi@ibiizabu.cc⋯
4	5bd761dcae323e45a93cd01d	2014-07-24 02:47:51.251	[{'name': 'printer paper', 'tags': ['office', ...	Seattle	False	In store	M	53	posti@reppijnup⋯
...	...	...	...	...	...	...	...	...	
4995	5bd761deae323e45a93ce31c	2015-05-03 22:54:57.514	[{'name': 'backpack', 'tags': ['school', 'trav...	San Diego	False	In store	M	20	timibjup@epce⋯
4996	5bd761deae323e45a93ce329	2013-10-03 13:04:06.735	[{'name': 'laptop', 'tags': ['electronics', 's...	London	True	In store	M	55	calonid@tipi.⋯
4997	5bd761deae323e45a93ce338	2013-07-24 21:01:35.433	[{'name': 'backpack', 'tags': ['school', 'trav...	Seattle	False	In store	M	19	ojo@tupcium.⋯
4998	5bd761deae323e45a93ce33a	2016-12-22 15:24:27.219	[{'name': 'envelopes', 'tags': ['stationary', ...	Denver	True	In store	F	53	tutrigkim@face.⋯
4999	5bd761deae323e45a93ce33c	2017-01-31 10:20:07.347	[{'name': 'envelopes', 'tags': ['stationary', ...	Seattle	False	In store	M	40	cuccefor@ase.g⋯

5000 rows × 10 columns

```
In [36]: age_groups = [15,20, 25,30, 35, 40,45, 50,55, 60,65,70,75,80]
```

```
In [40]: plt.hist(df['age'], edgecolor = 'black',
                  bins = age_groups)
         plt.title('Distribution of customer age')
         plt.xlabel('Age')
         plt.ylabel('Count')
```

Out[40]: Text(0, 0.5, 'Count')