FindMeAShoe

February 7, 2017

```python
In [ ]: import operator


        class Feet:
            def __init__(self, height, width, age, gender):
                self.height = height
                self.width = width
                self.age = age
                self.gender = gender

        data = []

        with open("input.txt", "r") as iFile:
            for line in iFile:
                user = list(map(str, line.split()))
                MyFeet = Feet(int(user[0]), int(user[1]), int(user[2]), user[-1])
                data.append(MyFeet)
        # sort data age wise
        data.sort(key=operator.attrgetter('age'))
```

```python
In [51]: import numpy as np

         ind = np.arange(250)
         width = 0.35

         menFootHeight = []
         womenFootHeight = []

         for user in data:
             if user.gender == 'M':
                 menFootHeight.append(user.height)
             else:
                 womenFootHeight.append(user.height)
```
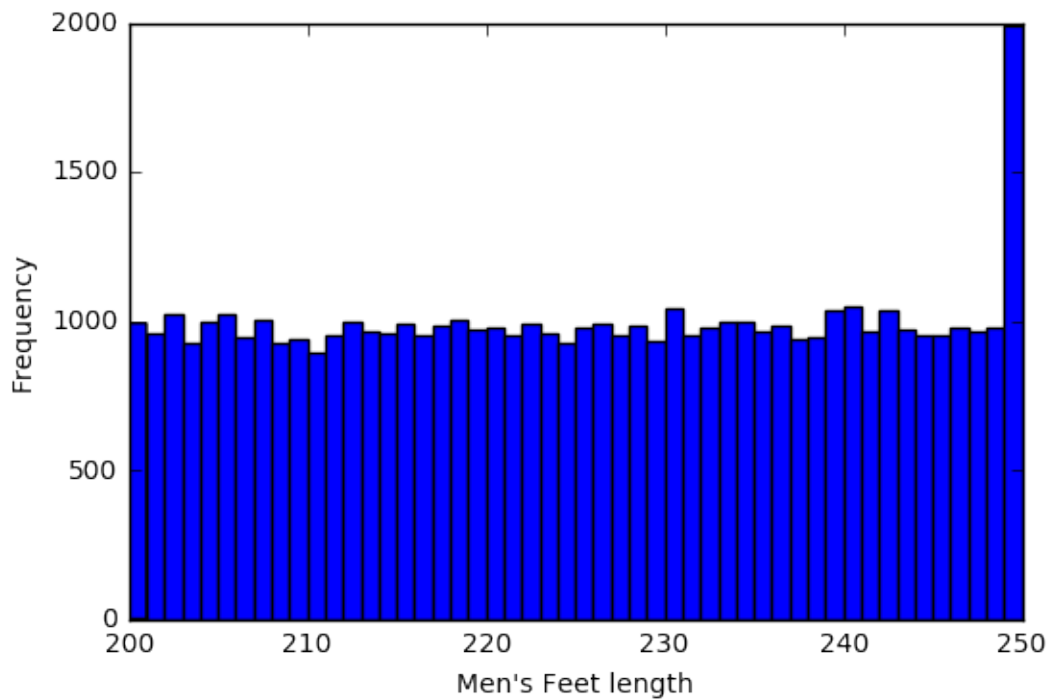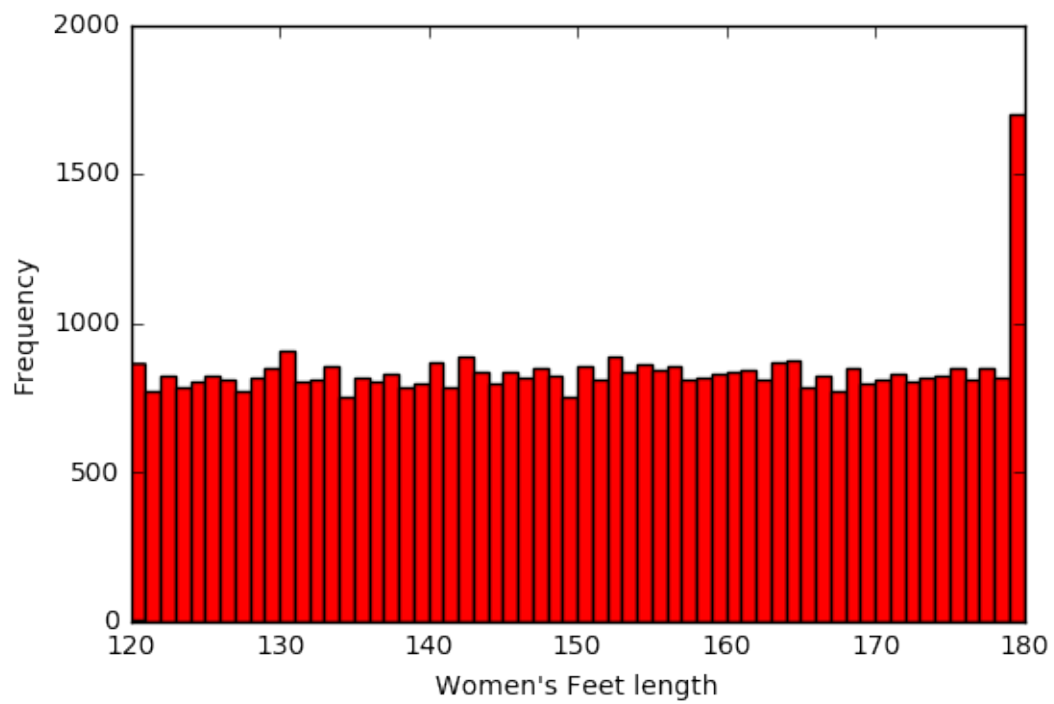
```python
In [56]: import matplotlib.pyplot as plt
         plt.hist(menFootHeight, bins=[i for i in range(min(menFootHeight), max(men
         plt.xlim(min(menFootHeight), max(menFootHeight))
         plt.ylim(0, 2000)
```

```
plt.xlabel("Men's Feet length")
plt.ylabel("Frequency")
plt.show()
```



```
In [55]: plt.hist(womenFootHeight, bins=[i for i in range(min(womenFootHeight),
                                              max(womenFootHeight) + 1)
         plt.xlabel("Women's Feet length")
         plt.ylabel("Frequency")
         plt.xlim(min(womenFootHeight), max(womenFootHeight))
         plt.ylim(0, 2000)
         plt.show()
```

In [ ]: