

2. With Python alone, can you guarantee a job?

```
In [1]: from tools import data_loader
import pandas as pd
```

```
In [2]: df = data_loader.load_data("Developer Kaki _ Developer Salary Surv
```

```
In [3]: from tools import frequency_counter
```

```
In [4]: counter_info, wordcloud = frequency_counter.freq_counter(df)
```

We take the 20 most common tech will be enough.

```
In [5]: twentieth_most_common = [x[0] for x in counter_info.most_common()]
```

The density is calculated by taking the occurrence of each tech divide by its neighbouring tech. For eg, Person A uses Java, Python, C# at job. The density for "Python" is 1/3. This value is taken from every person using Python and calculate the average density for Python.

```
In [6]: density_output = frequency_counter.calculate_density(twentieth_most_common)
density_output
```

```
Out[6]: {'.net': 0.5521412037037038,
'java': 0.49794626941685777,
'php': 0.46469671201814045,
'flutter': 0.4610476190476191,
'react native': 0.4168716204430491,
'c#': 0.3923305860805861,
'javascript': 0.39135027885027873,
'laravel': 0.3859710550887021,
'python': 0.35731697440881105,
'sql': 0.3356434240362812,
'vuejs': 0.33353174603174607,
'react': 0.32464569160997714,
'aws': 0.32421254960317447,
'angular': 0.3046208112874779,
'nodejs': 0.2699011680143755,
'js': 0.2577777777777778,
'typescript': 0.23325396825396827,
'mysql': 0.2260442773600669,
'docker': 0.1949590442237501,
'html': 0.18811612364243946}
```

Take a look at the list and say we ignore the frameworks and only look at the general purpose core programming languages. We will have PHP, C#, Javascript, Java, Python, .NET.

```
In [7]: filtered_density = { tech: density_output[tech] for tech in ["php"
```

```
In [8]: dict(sorted(filtered_density.items(), key=lambda item: item[1], re
```

```
Out[8]: {'.net': 0.5521412037037038,  
        'java': 0.49794626941685777,  
        'php': 0.46469671201814045,  
        'c#': 0.3923305860805861,  
        'javascript': 0.39135027885027873,  
        'python': 0.35731697440881105}
```

We can see from the list that python has the lowest density. This might indicate that most people who know Python uses a lot more other technology too. To answer the question, it might seem that we might need to learn more than Python if we are to secure a job.