

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 Survey 2022 Result")
```

```
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()[0:20]]
```

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, df)
density_output
```

```
Out[6]: {'.net': 0.535309829059829,
'flutter': 0.511984126984127,
'java': 0.4792759528053648,
'php': 0.46650289745527823,
'react native': 0.4349697404045231,
'c#': 0.4138821630347054,
'laravel': 0.39925044091710754,
'javascript': 0.37960040605389433,
'vuejs': 0.35937328954570336,
'python': 0.3533005189255189,
'aws': 0.3290063057186344,
'react': 0.3238678804855274,
'sql': 0.32214781746031745,
'angular': 0.30082539682539683,
'nodejs': 0.26883503401360537,
'typescript': 0.2314079952968842,
'mysql': 0.22766703580657072,
'docker': 0.21849909349909352,
'css': 0.19376653439153438,
'html': 0.19360500610500614}
```

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", "c#", "javascript"] }
```

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

```
Out[8]: {'.net': 0.535309829059829,  
        'java': 0.4792759528053648,  
        'php': 0.46650289745527823,  
        'c#': 0.4138821630347054,  
        'javascript': 0.37960040605389433,  
        'python': 0.3533005189255189}
```

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.