

The following report covers the insight from the Job data .

Dataset

The dataset was in json files. These Json files had the following attributes with the given dictionary and these are namely as follows :

1. Listing_ID
2. Candidate_ID
3. Listing_Content
4. ATS_Status
5. Listing_Longitude
6. Listing_Latitude
7. Candidate_Longitude
8. Candidate_Latitude
9. Listing_Jobtitle
10. CV_Experience
11. Listing_Skills
12. CV_Skills
13. CV_Highest_Education

These are the attributes which are present in the dataset that has been provided. As we start collecting the insights we would do feature engineering and generate more attributes.

Checking for the NULL and missing values

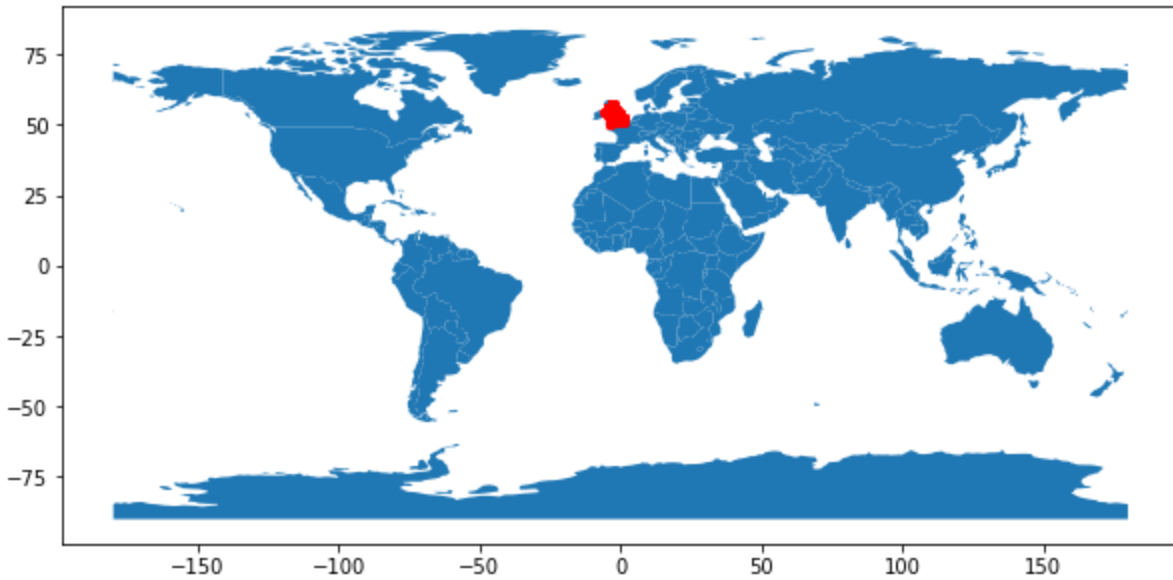
We concluded that the following attributes doesn't have any missing value

Listing_ID	False
Candidate_ID	False
Listing_Content	False
ATS_Status	False
Listing_Longitude	False
Listing_Latitude	False
Candidate_Longitude	False
Candidate_Latitude	False
Listing_Jobtitle	False
CV_Experience	False
Listing_Skills	False
CV_Skills	False
CV_Highest_Education	False

dtype: bool

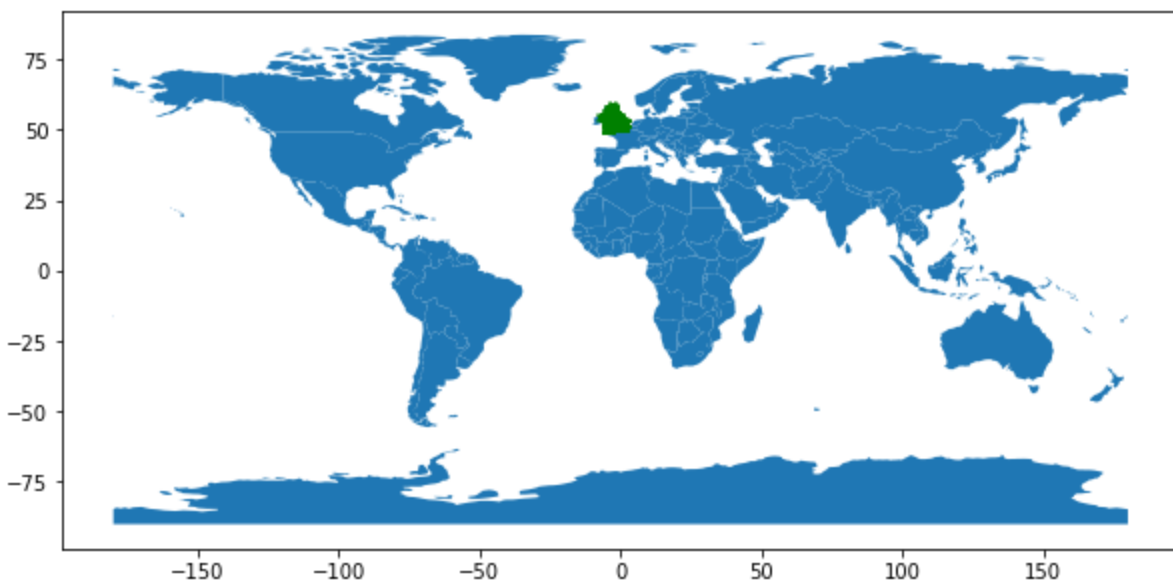
Location of the Job Posted

From the Job Listing Coordinates, namely the `Listing_Longitude` and `Listing_Latitude` we conclude the Job location on the map



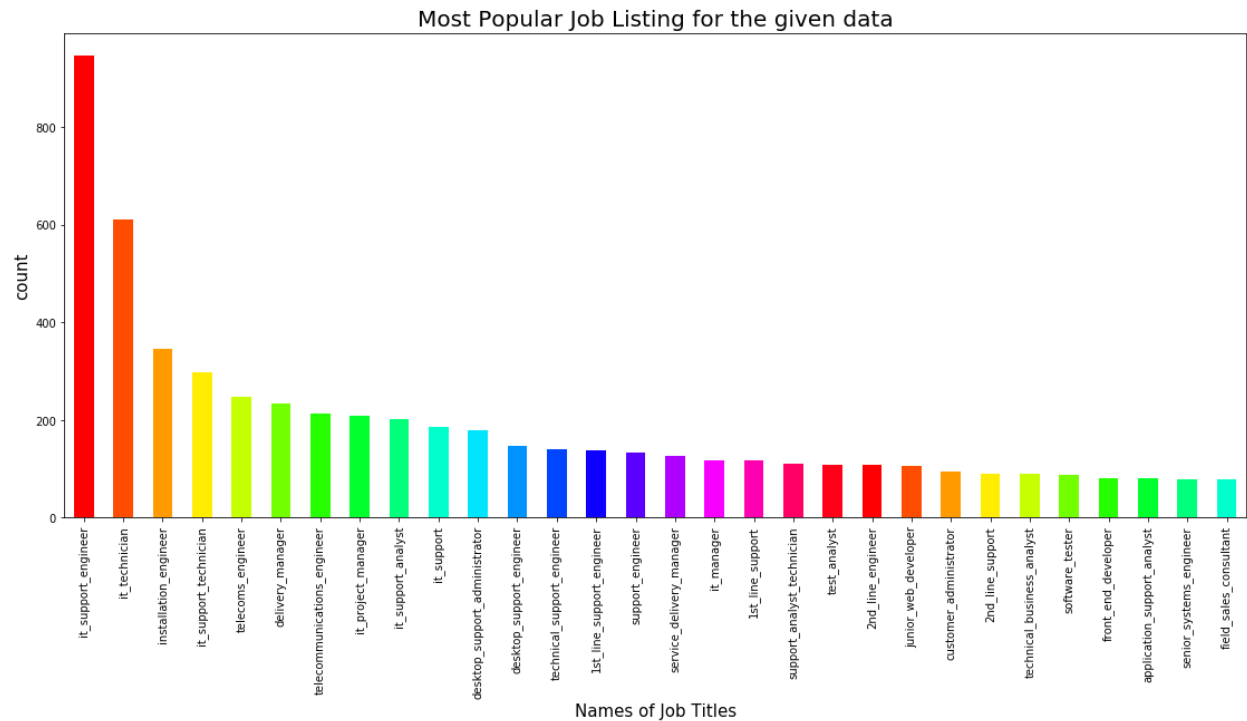
All the jobs listed are from the highlighted part (in Red) of the globe . These jobs are posted from Europe and are in France and England.

Location of the Candidates applying for the Jobs Listed



All the candidates applying for the job are from the highlighted part (in Green) of the map . These candidates are mainly from France and England in Europe.
These are computed from the coordinates provided in the dataset.

Most Popular Job Listing

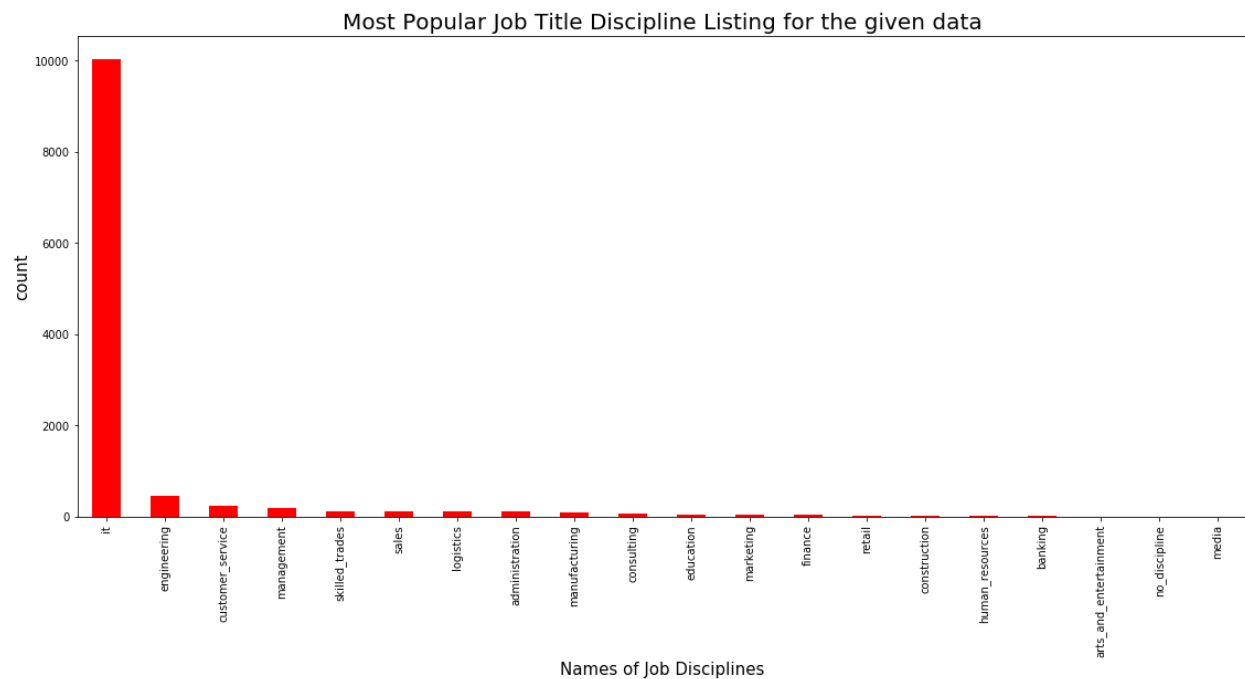


These are the most demanding Jobs from the given dataset (Top 30)

Job Profile	Count
it_support_engineer	946
it_technician	611
installation_engineer	345
it_support_technician	297
telecoms_engineer	248
delivery_manager	234
telecommunications_engineer	213
it_project_manager	209
it_support_analyst	201
it_support	186
desktop_support_administrator	180
desktop_support_engineer	147
technical_support_engineer	140
1st_line_support_engineer	138
support_engineer	133
service_delivery_manager	126
1st_line_support	118

it_manager	118
support_analyst_technician	111
2nd_line_engineer	108
test_analyst	108
junior_web_developer	105
customer_administrator	94
2nd_line_support	90
technical_business_analyst	90
software_tester	88
front_end_developer	81
application_support_analyst	81
field_sales_consultant	79
senior_systems_engineer	79

Most Popular Job Title Discipline

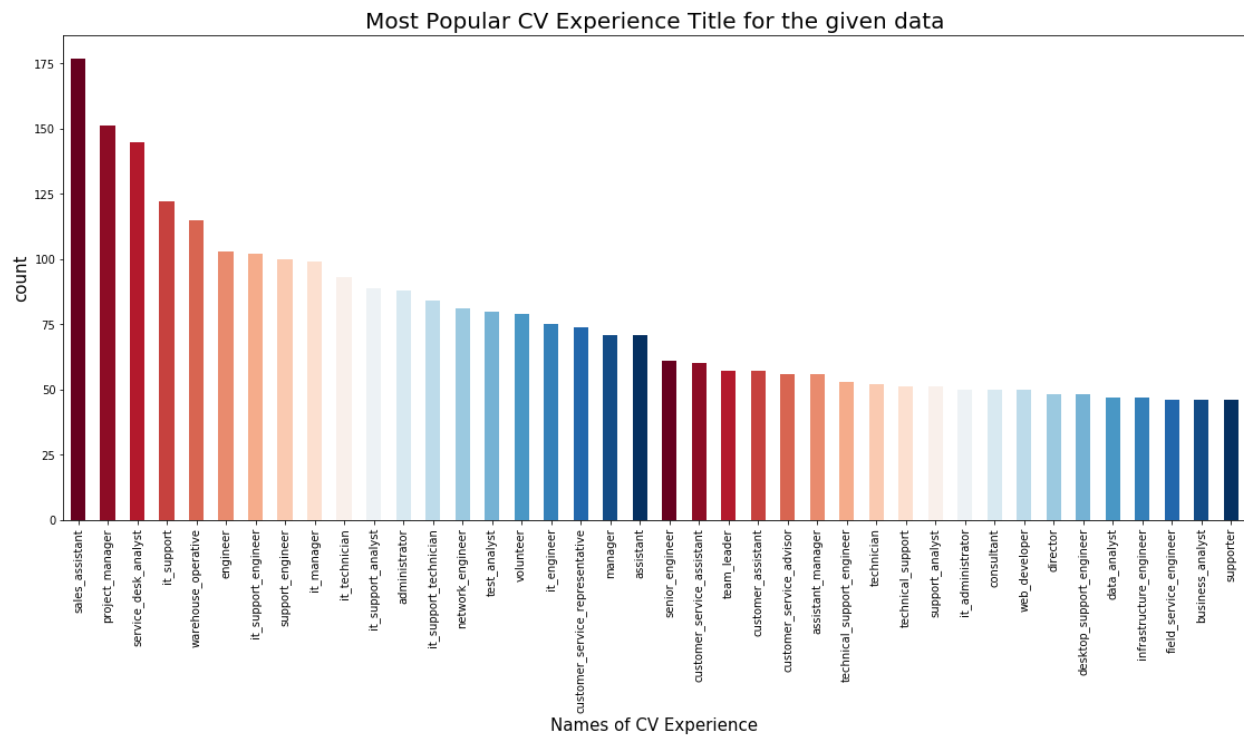


These are the most demanding Job Title Discipline from the given dataset (Top 30)

Job Title Discipline	Count
it	10047
engineering	463
customer_service	246
management	197
skilled_trades	114
sales	107

logistics	105
administration	102
manufacturing	78
consulting	62
education	50
marketing	48
finance	34
retail	17
construction	13
human_resources	12
banking	8
arts_and_entertainment	4
no_discipline	4
media	2

Most Popular CV Experience Title

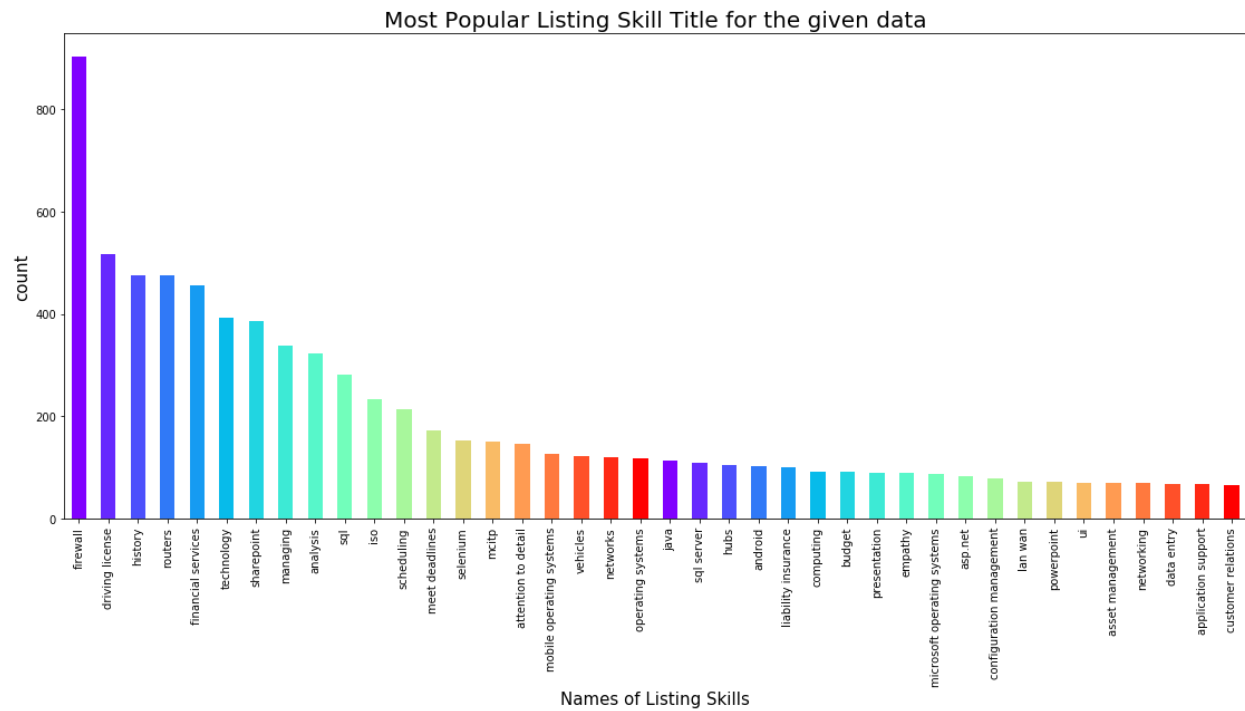


These are the most frequent CV EXPERIENCE TITLE from the given dataset (Top 30)

CV EXPERIENCE TITLE	COUNT
sales_assistant	177
project_manager	151
service_desk_analyst	145
it_support	122

warehouse_operative	115
engineer	103
it_support_engineer	102
support_engineer	100
it_manager	99
it_technician	93
it_support_analyst	89
administrator	88
it_support_technician	84
network_engineer	81
test_analyst	80
volunteer	79
it_engineer	75
customer_service_representative	74
manager	71
assistant	71
senior_engineer	61
customer_service_assistant	60
customer_assistant	57
team_leader	57
assistant_manager	56
customer_service_advisor	56
technical_support_engineer	53
technician	52
technical_support	51
support_analyst	51
web_developer	50
it_administrator	50
consultant	50
director	48
desktop_support_engineer	48
infrastructure_engineer	47
data_analyst	47
business_analyst	46
field_service_engineer	46
supporter	46

Most Popular Listing Skill Title

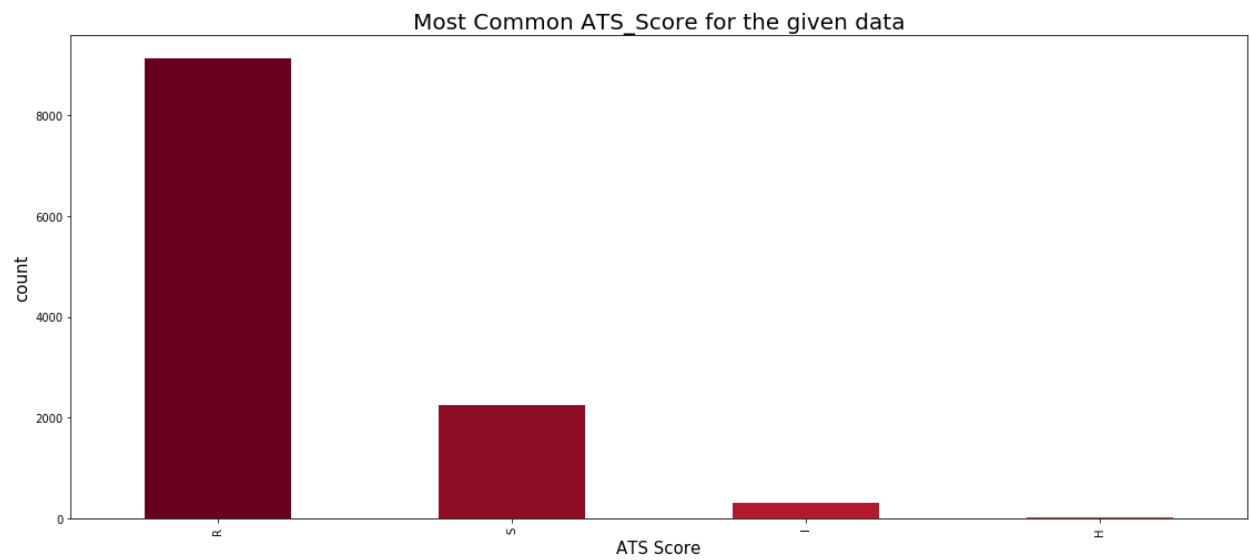


These are the most frequent Listing Skill Title from the given dataset (Top 30)

Listing Skill Title	Count
firewall	902
driving license	517
history	476
routers	475
financial services	455
technology	392
sharepoint	386
managing	338
analysis	324
sql	281
iso	233
scheduling	213
meet deadlines	173
selenium	154
mcitp	151
attention to detail	147
mobile operating systems	126
vehicles	123
networks	121
operating systems	119
java	114

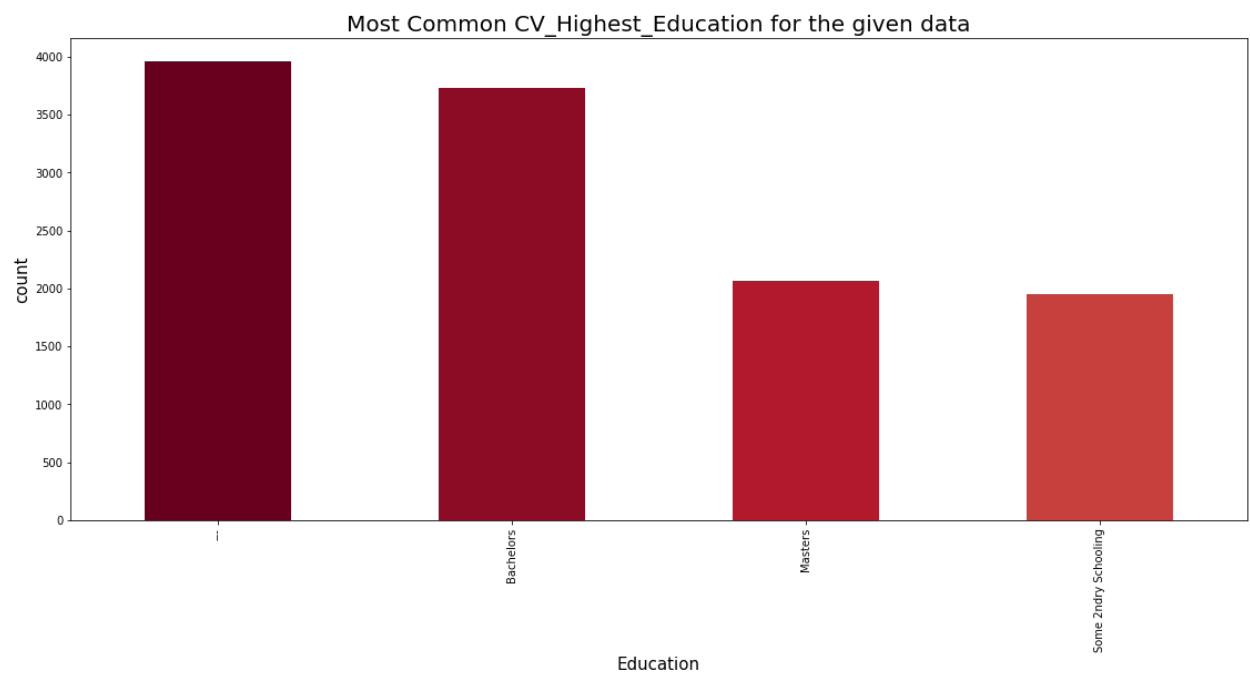
sql server	109
hubs	105
android	102
liability insurance	100
computing	93
budget	92
presentation	91
empathy	89
microsoft operating systems	87
asp.net	83
configuration management	80
lan wan	73
powerpoint	72
ui	71
asset management	71
networking	71
data entry	69
application support	68
customer relations	66

Most ATS Status Title



ATS Status	Count
R	9117
S	2257
I	313
H	26

Most Frequent Education Title

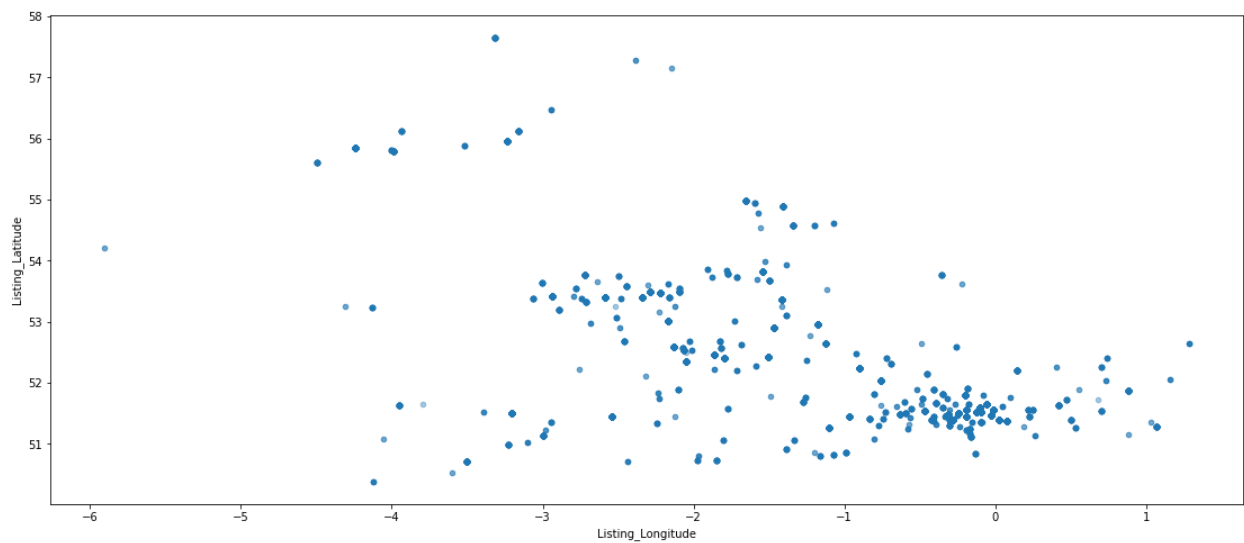


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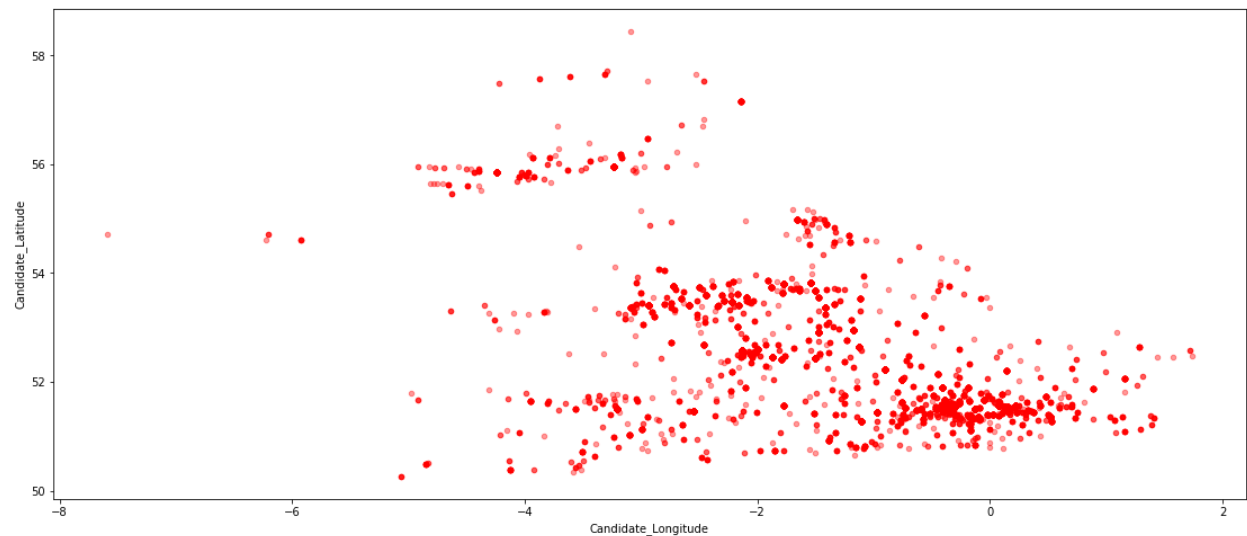
These are the most frequent Highest Education Title from the given dataset

Highest Education	Count
---	3963
Bachelors	3734
Masters	2064
Some 2ndry Schooling	1952

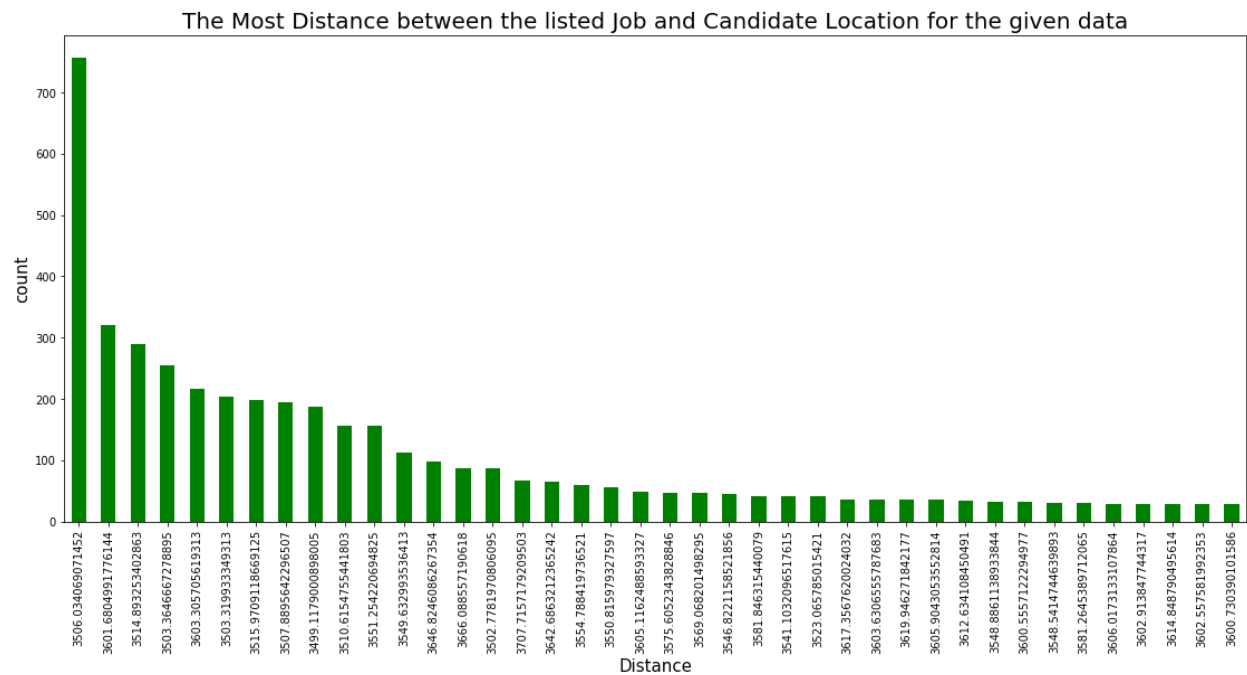
How are the Job Listed spread out based on the Coordinates of the Job Listing



How are the Candidate applying for the Job spread out ?



The most distance between the candidate and the JOB location its applying



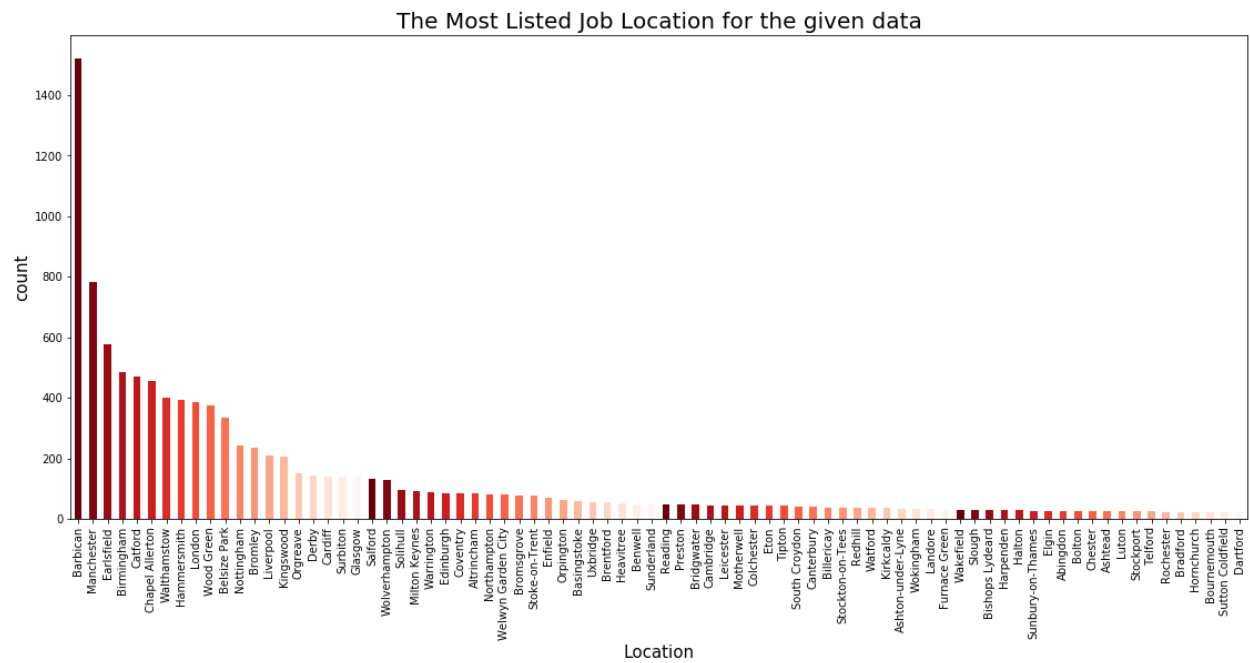
Distance between the candidate and the job location

Distance	Count
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3506.034069	756
3601.680499	321
3514.893253	289
3503.364667	254
3603.305706	217
3503.319933	203
3515.970912	199
3507.889564	195
3499.117900	187
3510.615476	156
3551.254221	156
3549.632994	112
3646.824609	97
3666.088557	86
3502.778197	86
3707.715718	66
3642.686321	65
3554.788420	59
3550.815979	55
3605.116249	49
3575.605234	47
3569.068201	46
3546.822116	44
3581.846315	42
3541.103210	41
3523.065785	41
3617.356762	36
3605.904305	35
3619.946272	35
3603.630656	35
3612.634108	34
3600.555712	32
3548.886114	32
3581.264539	30
3548.541474	30
3614.848790	29
3602.913848	29
3606.017313	29
3602.557582	29
3600.730390	29

Average distance between the coordinates provided for the Job Listed and the candidate is
3607.8957912267147 KM

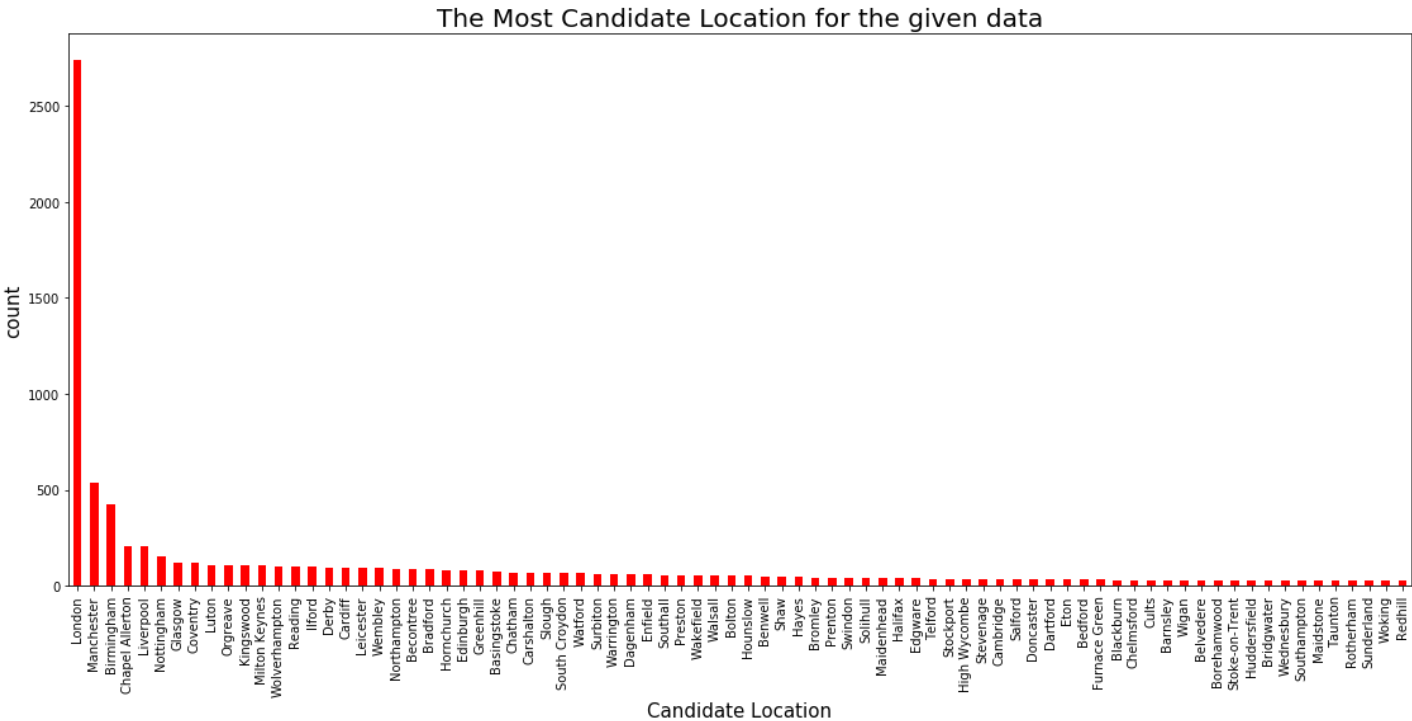
The Most Listed Location for the Job



These are the most frequent Listed Job Location from the given dataset (Top 30)

Location	Count
Barbican	1522
Manchester	781
Earlsfield	576
Birmingham	486
Catford	471
Chapel Allerton	457
Walthamstow	401
Hammersmith	392
London	384
Wood Green	375
Belsize Park	333
Nottingham	241
Bromley	235
Liverpool	211
Kingswood	206
Orgreave	149
Derby	143
Cardiff	141
Surbiton	140
Glasgow	139
Salford	133
Wolverhampton	129
Solihull	94

Milton Keynes	90
Warrington	87
Edinburgh	86
Coventry	86
Altrincham	83
Northampton	81
Welwyn Garden City	80



The Most frequent Candidate Location for the Jobs (Top 30)

Candidate Location	Count
London	2738
Manchester	535
Birmingham	425
Chapel Allerton	207
Liverpool	206
Nottingham	157
Glasgow	122
Coventry	118
Luton	111
Orgreave	107
Kingswood	106
Milton Keynes	105
Wolverhampton	102

Reading	98
Ilford	98
Derby	97
Cardiff	95
Leicester	94
Wembley	93
Northampton	91
Becontree	90
Bradford	85
Hornchurch	82
Edinburgh	81
Greenhill	79
Basingstoke	76
Chatham	70
Carshalton	67
Slough	66
South Croydon	65

Most Frequent Listing Content words

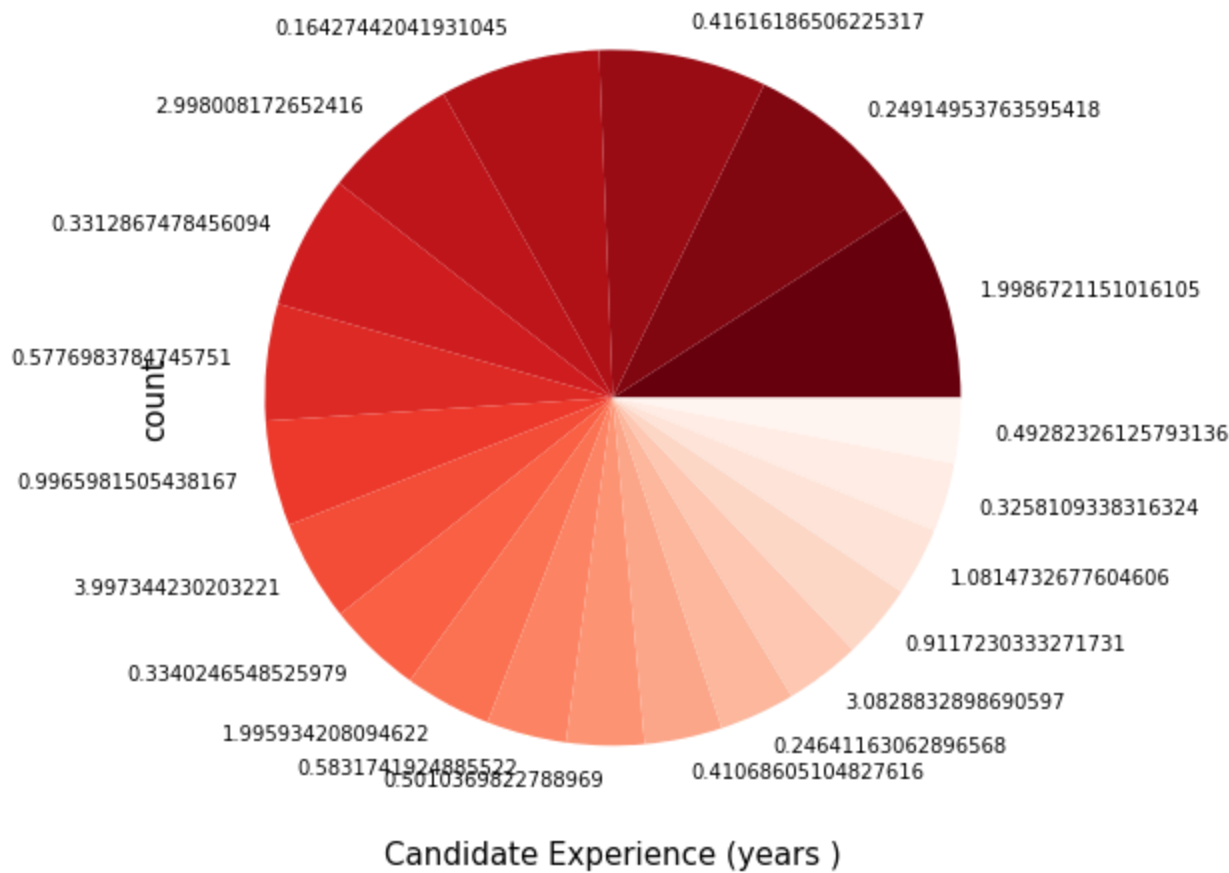
Most Frequent Listing_Content



[illegible]

The Most Experience Candidate Count

The Experience Candidate applying



The Most Experience Candidate applying for the job (Top 20)

Experience Count

1.998672	192
0.249150	183
0.416162	164
0.164274	157
2.998008	133
0.331287	131
0.577698	114
0.996598	103
3.997344	99

0.334025	93
1.995934	85
0.583174	78
0.501037	76
0.410686	76
0.246412	74
3.082883	74
0.911723	73
1.081473	67
0.325811	67
0.492823	64

Average Experience applying for the job from the given data
2.342710216849626 years

With 0 experience 726 Candidate applied for the job

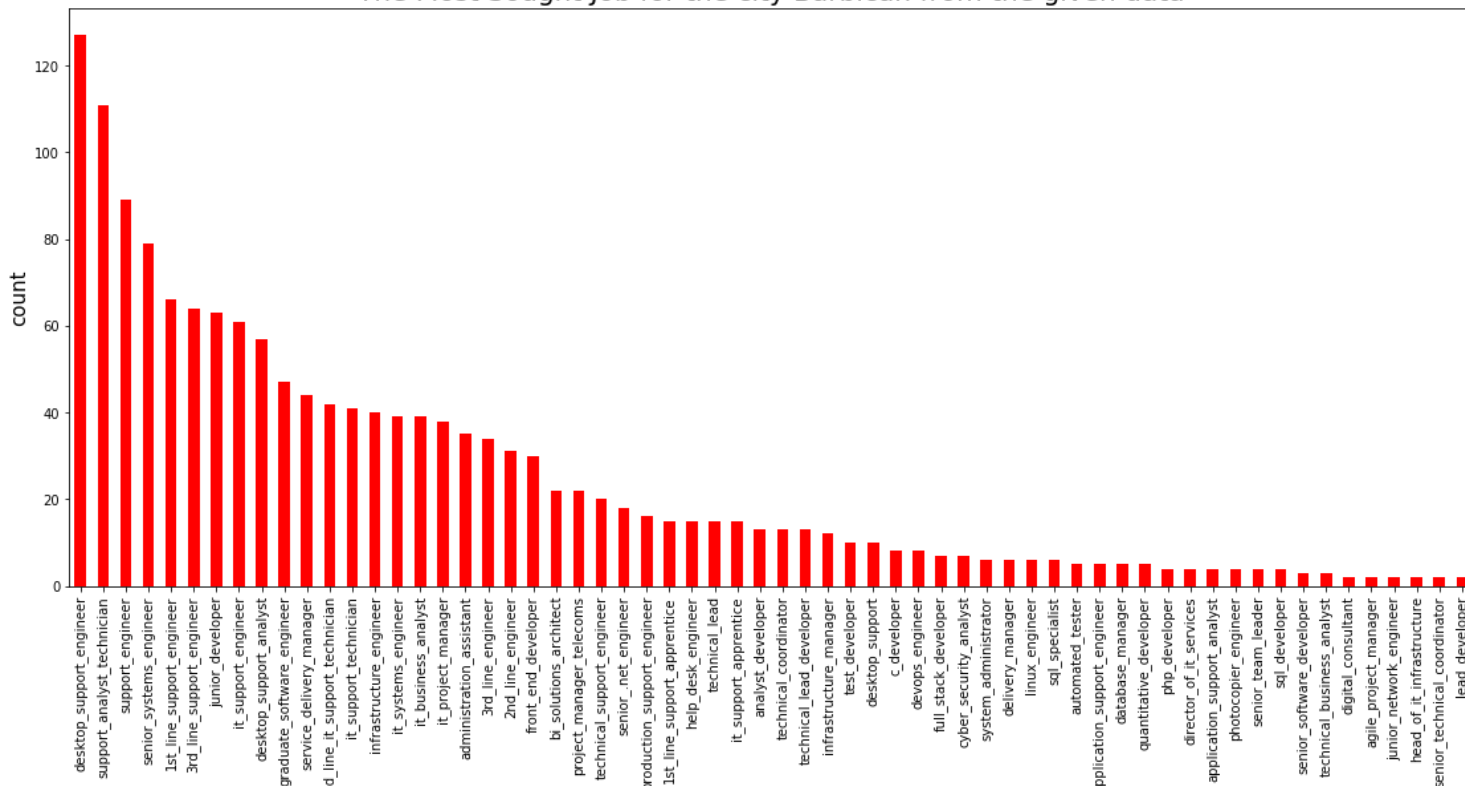
Most Sought Job in the Top Listed Locations

These Top locations are namely

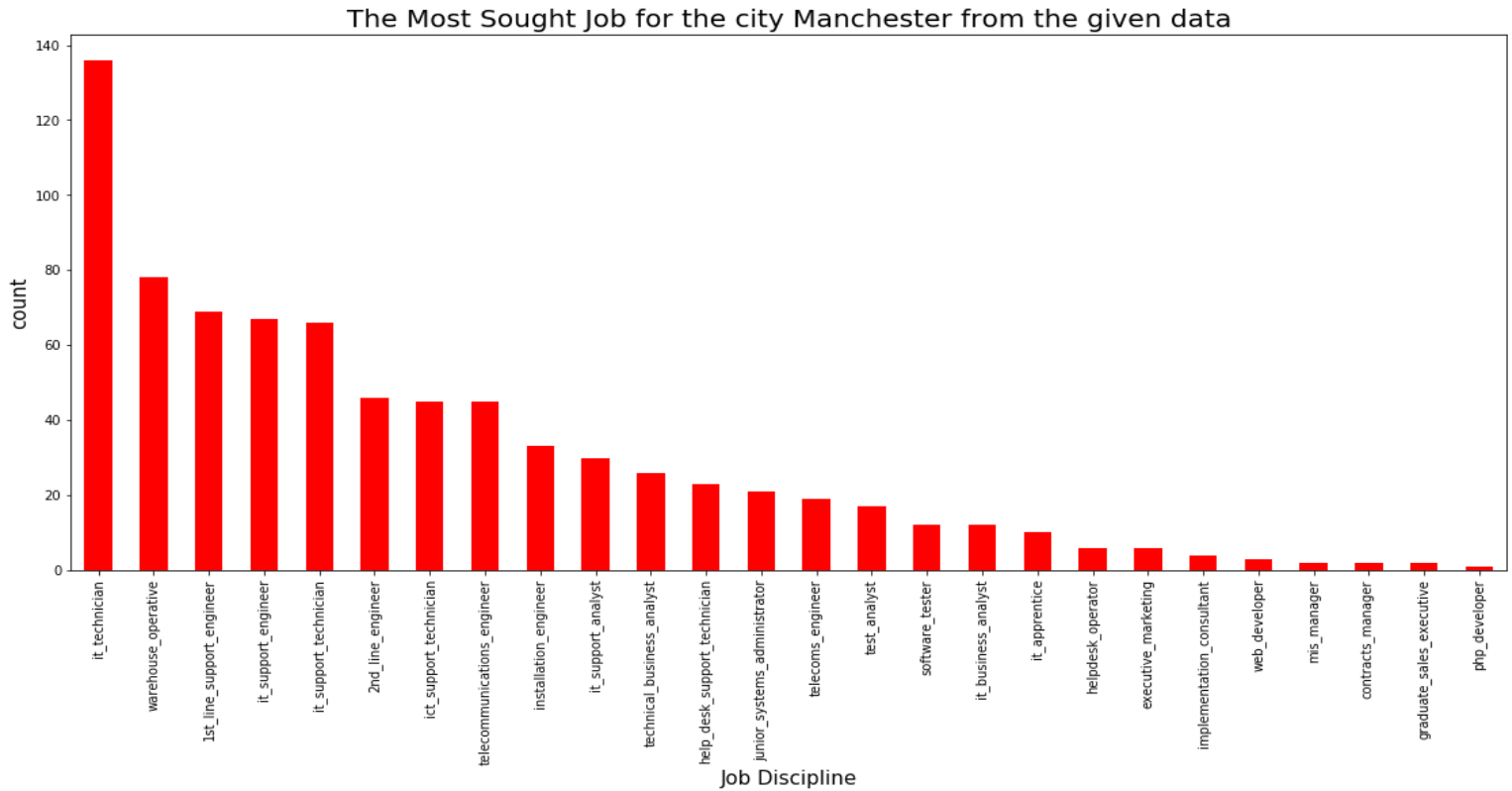
'Barbican', 'Manchester', 'Earlsfield', 'Birmingham', 'Catford', 'Chapel Allerton', 'Walthamstow', 'Hammersmith', 'London', 'Wood Green'

For Barbican

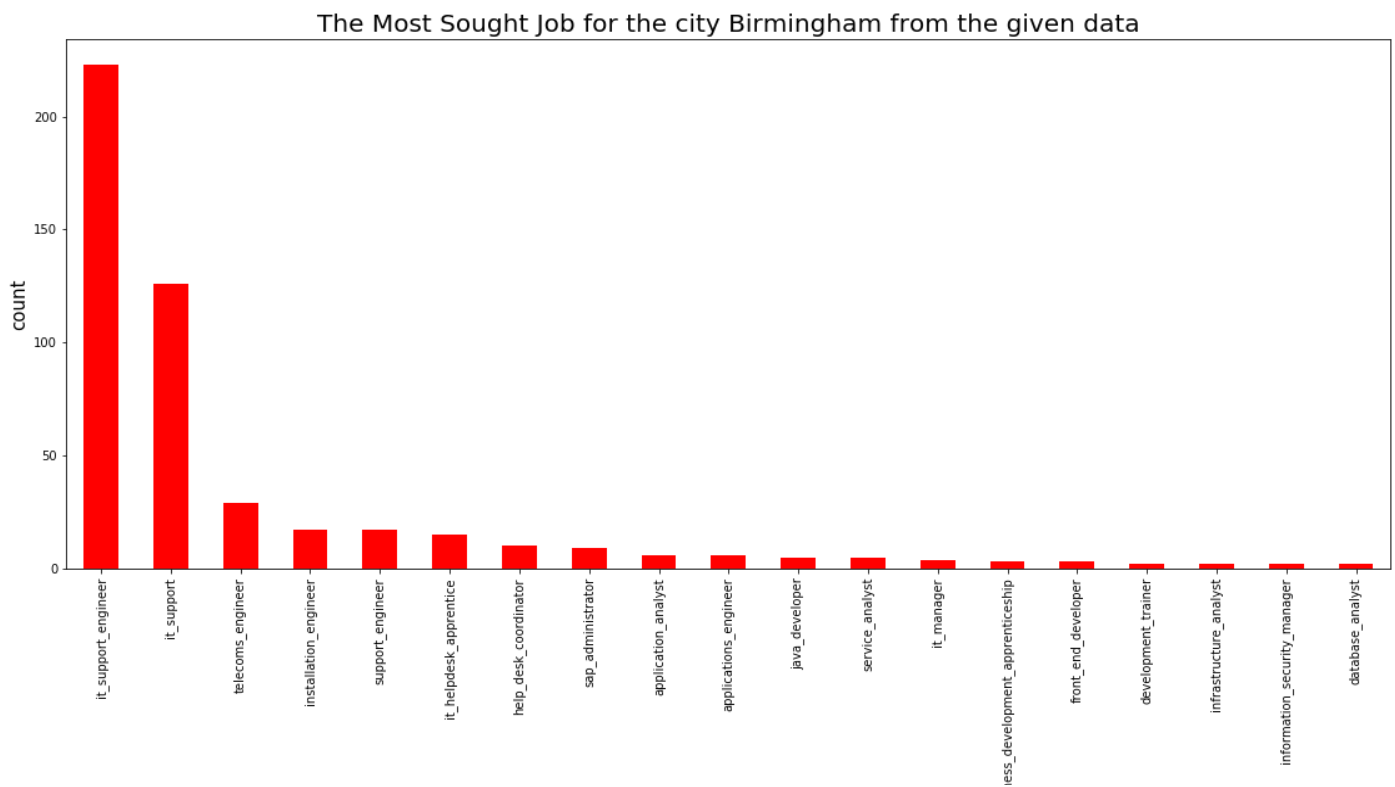
The Most Sought Job for the city Barbican from the given data



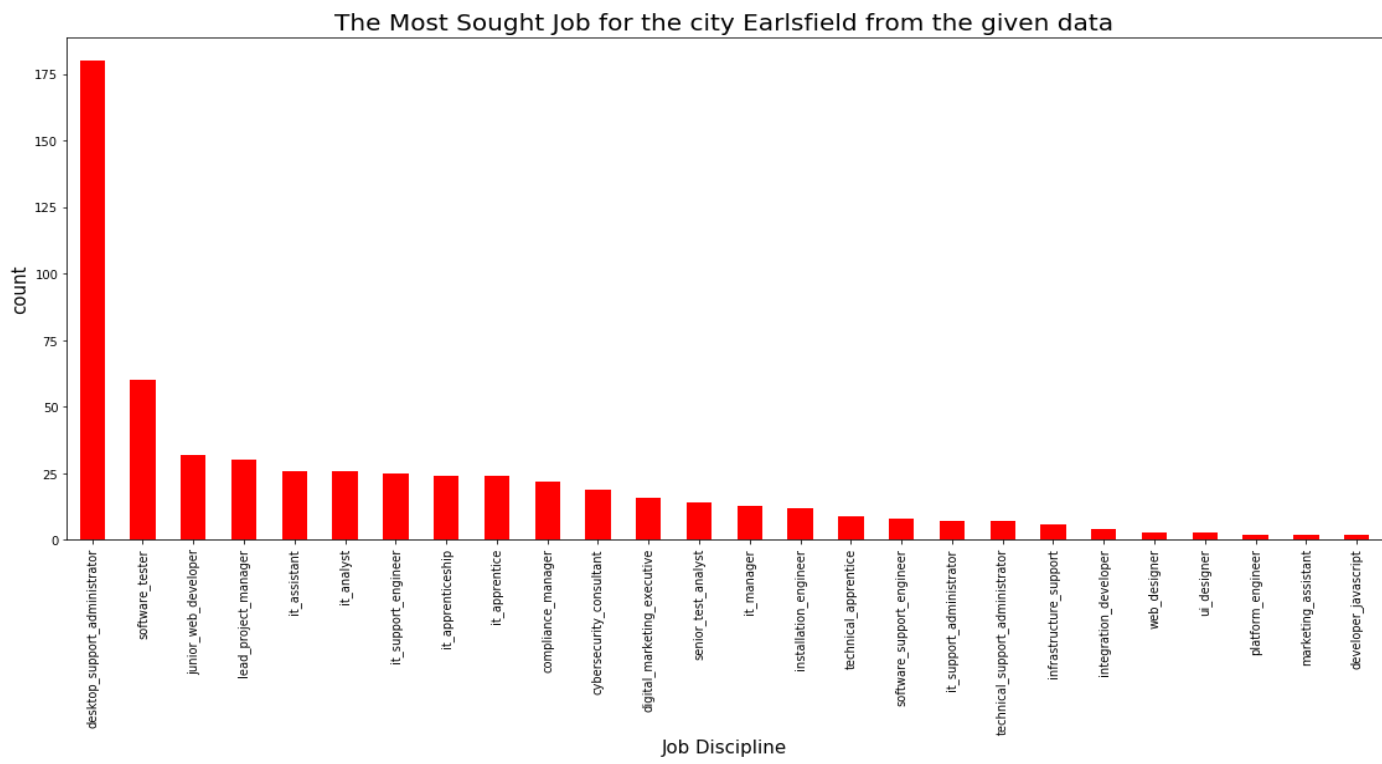
For Manchester



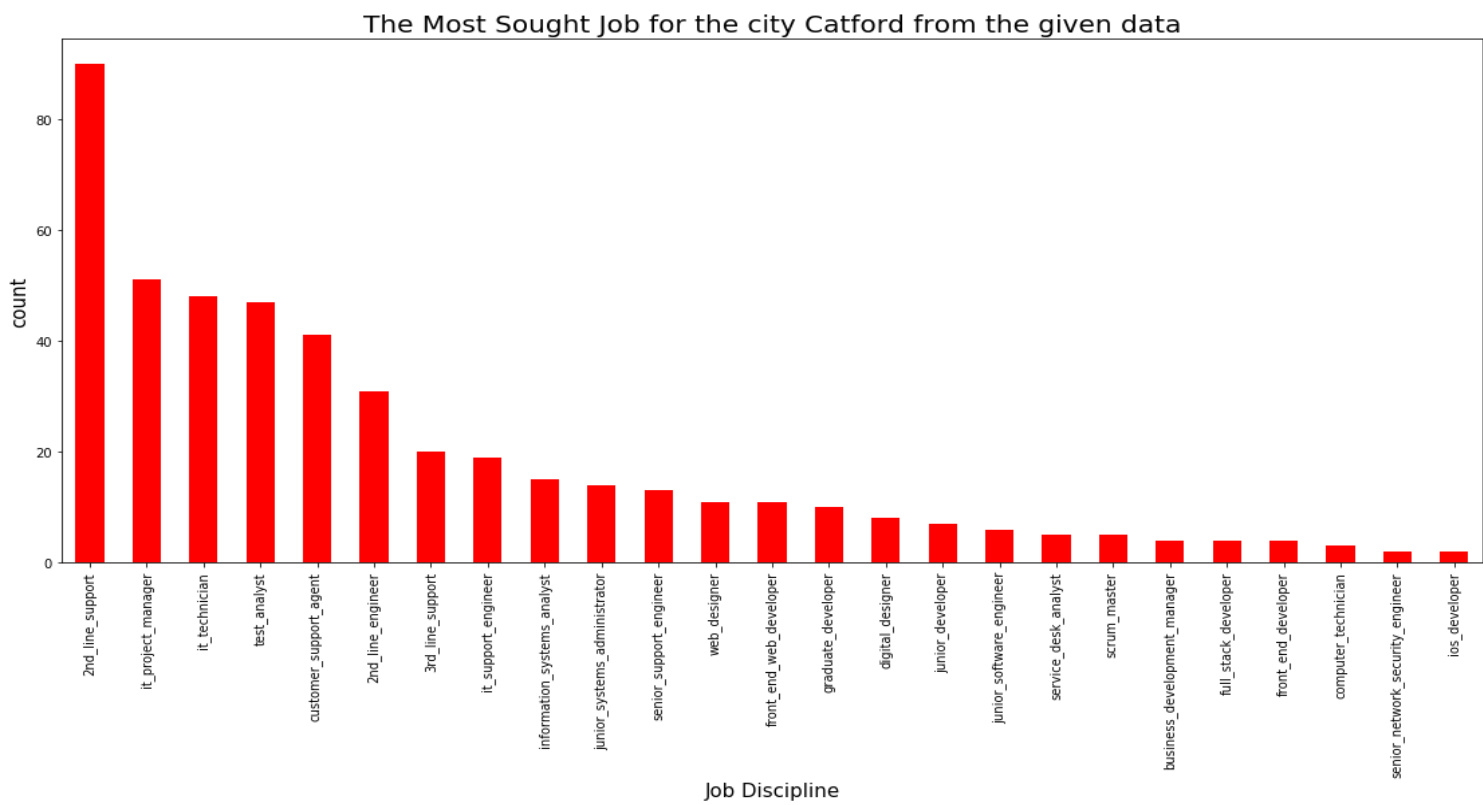
For Birmingham



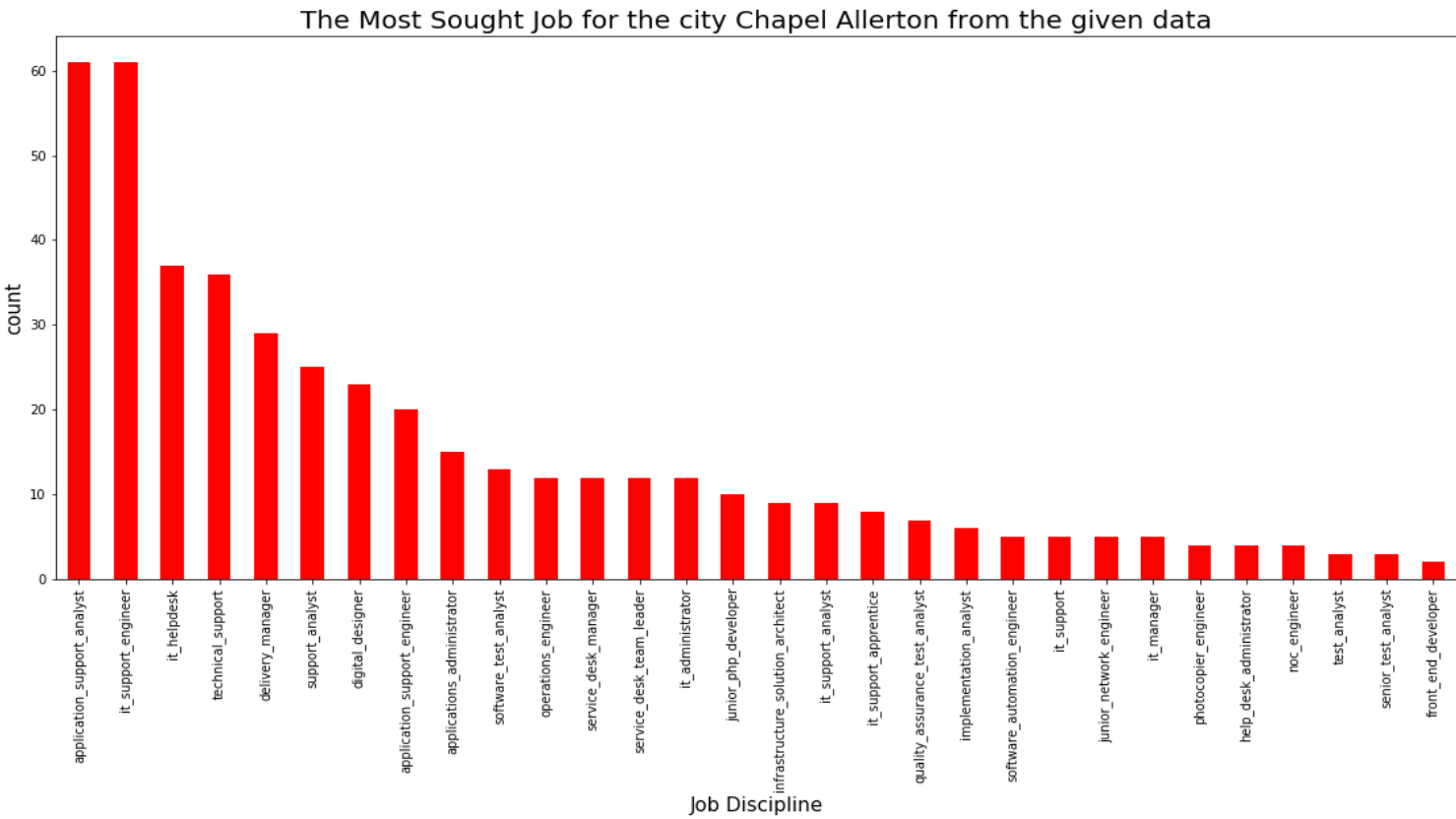
For **Earlsfield**



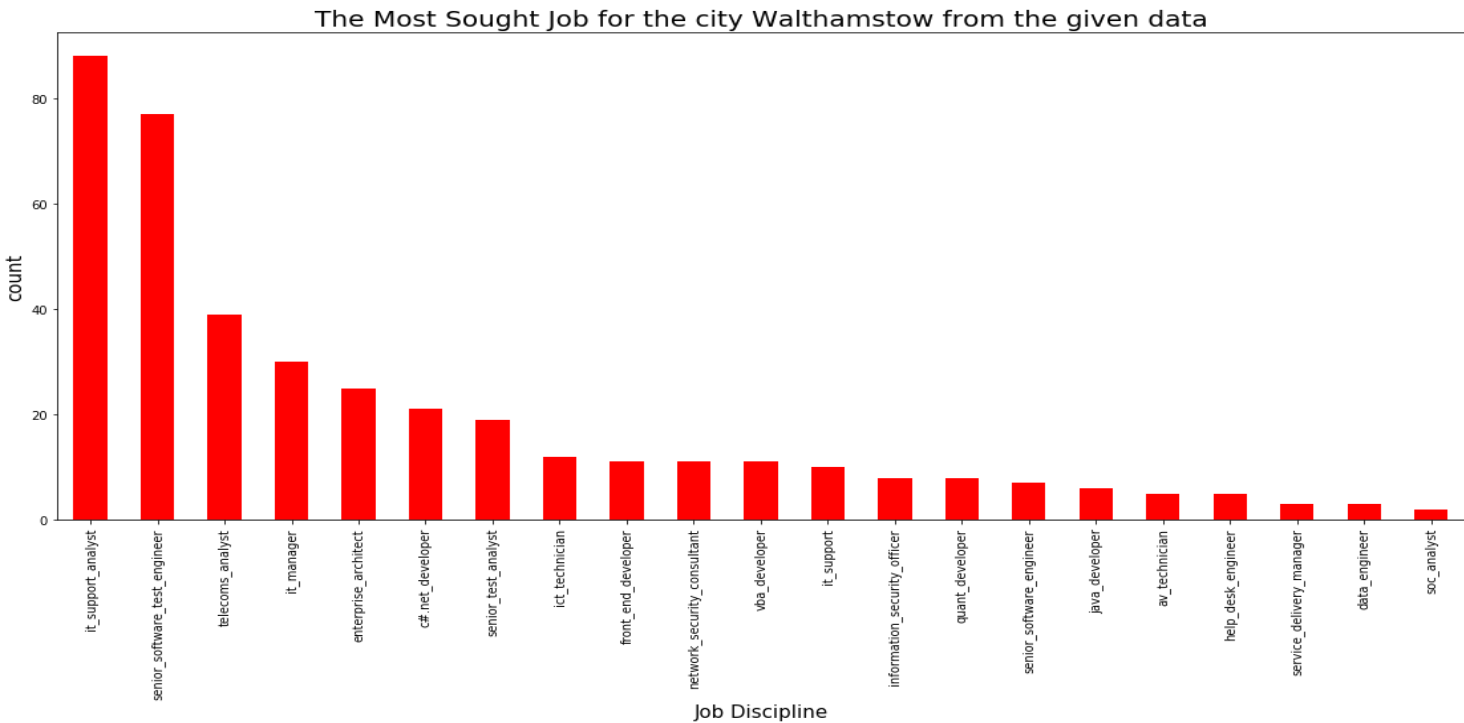
For **Catford**



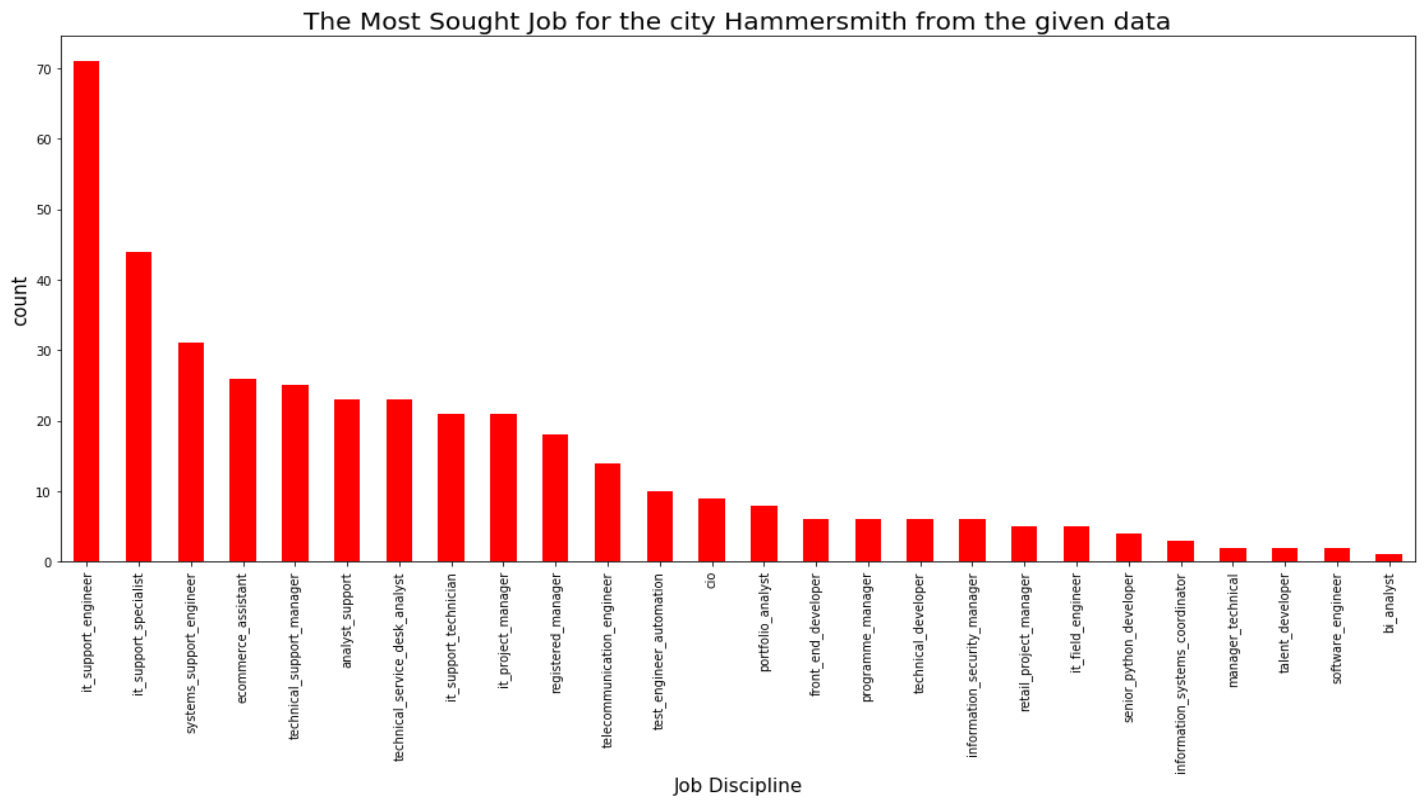
For Chapel Allerton



For Walthamstow



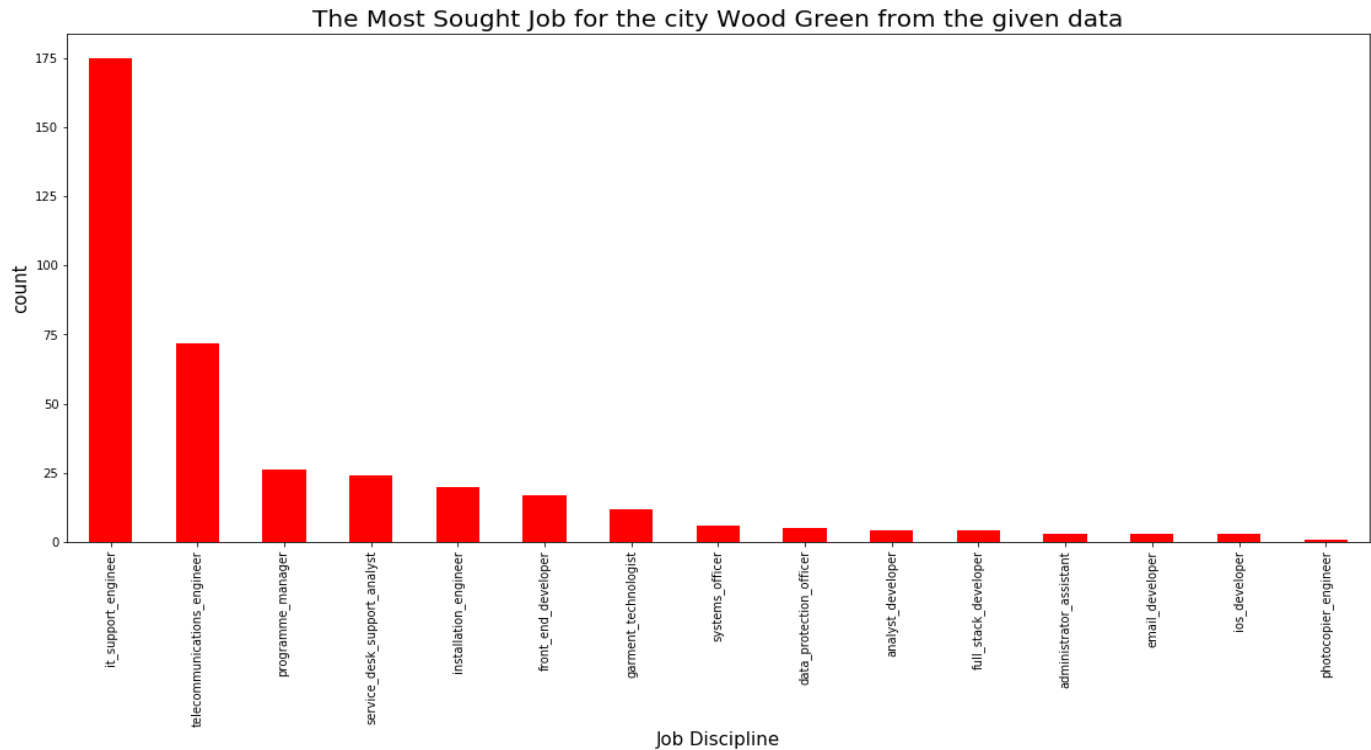
For Hammersmith



For London



For Wood Green



The Most Top skilled required for Top Sought Jobs

The most Required Skills for it_support_engineer :

1. managing
2. monitoring
3. knowledge base
4. customer service
5. training
6. interpersonal skill
7. support
8. research
9. recruitment

The most Required Skills for it_technician :

1. history
2. technology
3. android
4. spyware
5. sms
6. troubleshooting
7. preparation
8. vat
9. flexibility
10. admin
11. hardware
12. credit
13. back office
14. business
15. english
16. smartphone
17. support

The most Required Skills for installation_engineer :

1. vehicles
2. driving license
3. driving

The most Required Skills for it_support_technician :

1. system documentation
2. sharepoint
3. methodology
4. controls
5. active directory
6. windows 10
7. avaya
8. dhcp

9. infrastructure
10. business strategy
11. windows 7
12. ibm domino
13. application software
14. windows
15. windows 8
16. project delivery
17. netapp
18. disaster recovery
19. guidance
20. childcare
21. dns
22. wireless networking
23. storage
24. business
25. telephony
26. dell
27. security
28. operating systems
29. office 365
30. microsoft office
31. lan
32. routing
33. support
34. compliance

The most Required Skills for telecoms_engineer :

1. driving license
2. driving

The most Required Skills for delivery_manager :

1. financial services
2. leadership
3. accountability

4. digital marketing
5. first aid
6. driving license
7. education
8. training
9. management

The most Required Skills for telecommunications_engineer :

1. technology
2. driving
3. customer service
4. power tools
5. driving license
6. smartphone
7. test equipment
8. electrical
9. customer facing

The most Required Skills for it_project_manager :

1. methodology
2. solution design
3. infrastructure
4. design
5. project management
6. sales
7. documentation
8. analysis
9. technology
10. implementation
11. issue management
12. ms project
13. business
14. requirements gathering
15. project implementation
16. budget

17. coordination
18. bsi
19. engagement
20. support
21. planning

The most Required Skills for it_support_analyst :

1. organisational skills
2. customer focus
3. technology
4. infrastructure
5. computing
6. logging
7. time management
8. assurance
9. hardware
10. microsoft windows
11. service desk
12. customer service
13. business
14. customer focused
15. interpersonal skills
16. business requirements
17. active directory
18. hardware troubleshooting
19. support
20. 1st line
- 21.

The most Required Skills for it_support :

1. sql
2. hardware installation
3. printers
4. sla
5. technical advice
6. batch processing

7. scanners
8. database
9. support
10. 1st line

The most Required Skills for desktop_support_administrator :

1. sharepoint
2. fashion
3. visual basic
4. vba
5. administration
6. windows server
7. ccna
8. nas
9. windows 7
10. networking
11. vpn
12. firefox
13. windows
14. ccnp
15. documentation
16. internet explorer
17. written communication
18. internet
19. hardware
20. office 2010
21. dsl
22. network attached storage
23. lan
24. tcp ip
25. support

The most Required Skills for desktop_support_engineer :

1. call centre
2. telephone manner

3. maintenance
4. excel
5. 1st line
6. powerpoint
7. windows xp
8. networking
9. restoration
10. technology
11. hardware
12. service desk
13. business
14. outlook
15. operating systems
16. logging
17. ms office
18. analytical skills
19. mobile devices
20. support
21. microsoft word

The most Required Skills for technical_support_engineer :

1. apple certified
2. cisco certified
3. administration
4. maintenance
5. education
6. apple
7. 1st line
8. management
9. incident management
10. self starter
11. networking
12. windows
13. customer service
14. support
15. team player

16. vmware
17. technology
18. change management
19. itil
20. 2nd line
21. business
22. mcse
23. computer
24. microsoft certified
25. installation
26. ccnp

The most Required Skills for 1st_line_support_engineer :

1. mcitp
2. internet
3. infrastructure
4. customer relations
5. onsite support
6. troubleshooting
7. mcse
8. sla
9. hardware
10. decision making
11. interpersonal skills
12. active directory
13. support
14. sme
15. terminology
16. planning

The most Required Skills for support_engineer :

1. routers
2. firewall
3. customer relations
4. troubleshooting

5. cloud
6. citrix
7. active directory
8. microsoft exchange
9. employee engagement
10. terminology
11. networking
12. windows
13. remote support
14. symantec
15. vmware
16. mcitp
17. networks
18. technology
19. sla
20. business
21. interpersonal skills
22. dell
23. mcse
24. citrix xenapp
25. office 365
26. routing
27. administrative
28. switches
29. support
30. lan wan routers
31. decision making
32. planning

The most Required Skills for service_delivery_manager :

1. analysis
2. fashion
3. technology
4. change management
5. people management
6. private sector

7. customer service
8. document management
9. business
10. support
11. consultancy
12. personal development
13. 1st line
14. management

The most Required Skills for 1st_line_support :

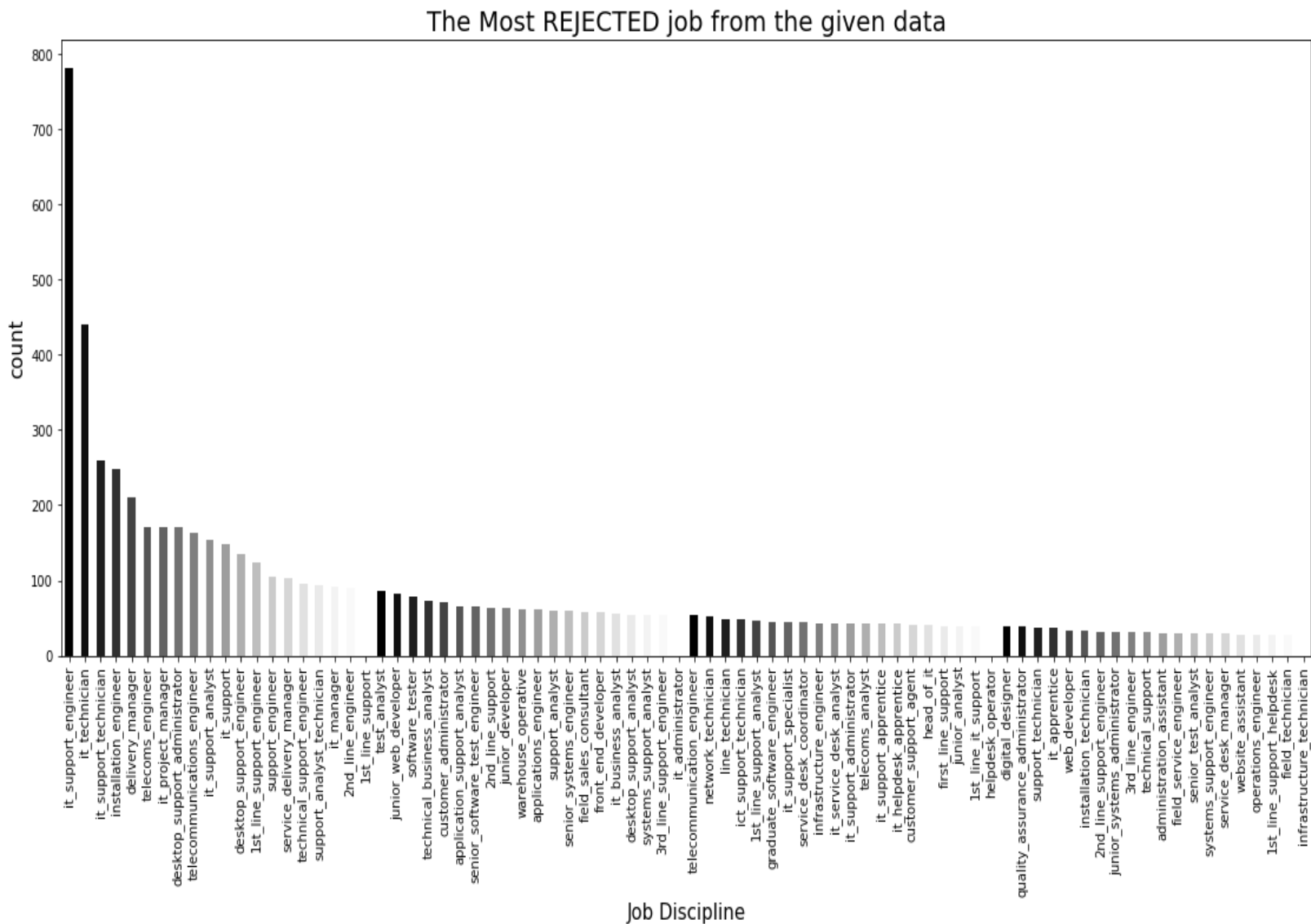
1. asset management
2. networking
3. web development
4. troubleshooting
5. design
6. business
7. telephony
8. excel
9. support
10. active directory
11. training
12. data analysis
13. graphic

The most Required Skills for it_manager :

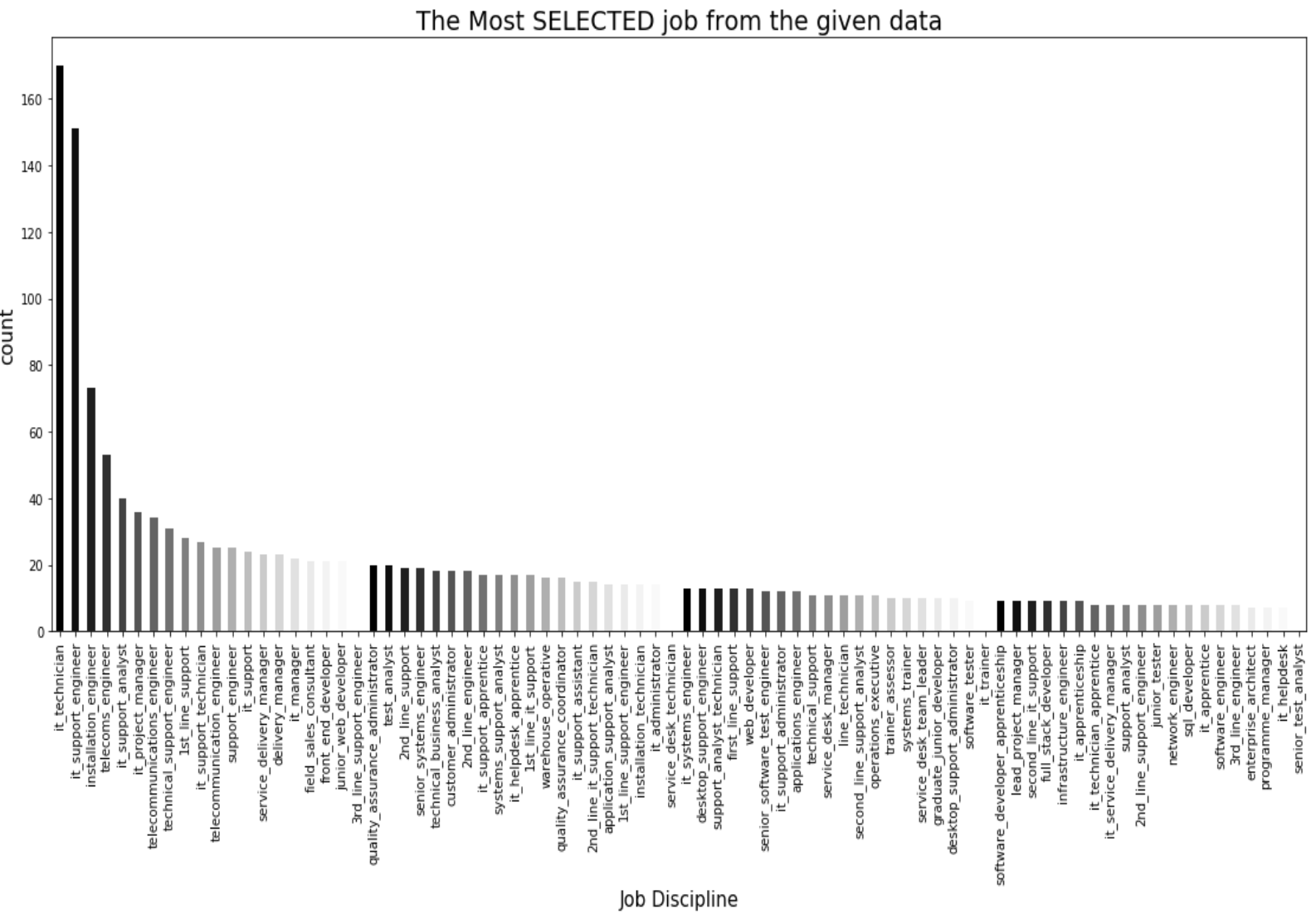
1. gdpr
2. microsoft sql server
3. retail
4. hardware
5. customer service
6. trading
7. business
8. analytical skills
9. legislation
10. team player

JOB SELECTION, HIRED , INTERVIEWED AND REJECTED INSIGHT

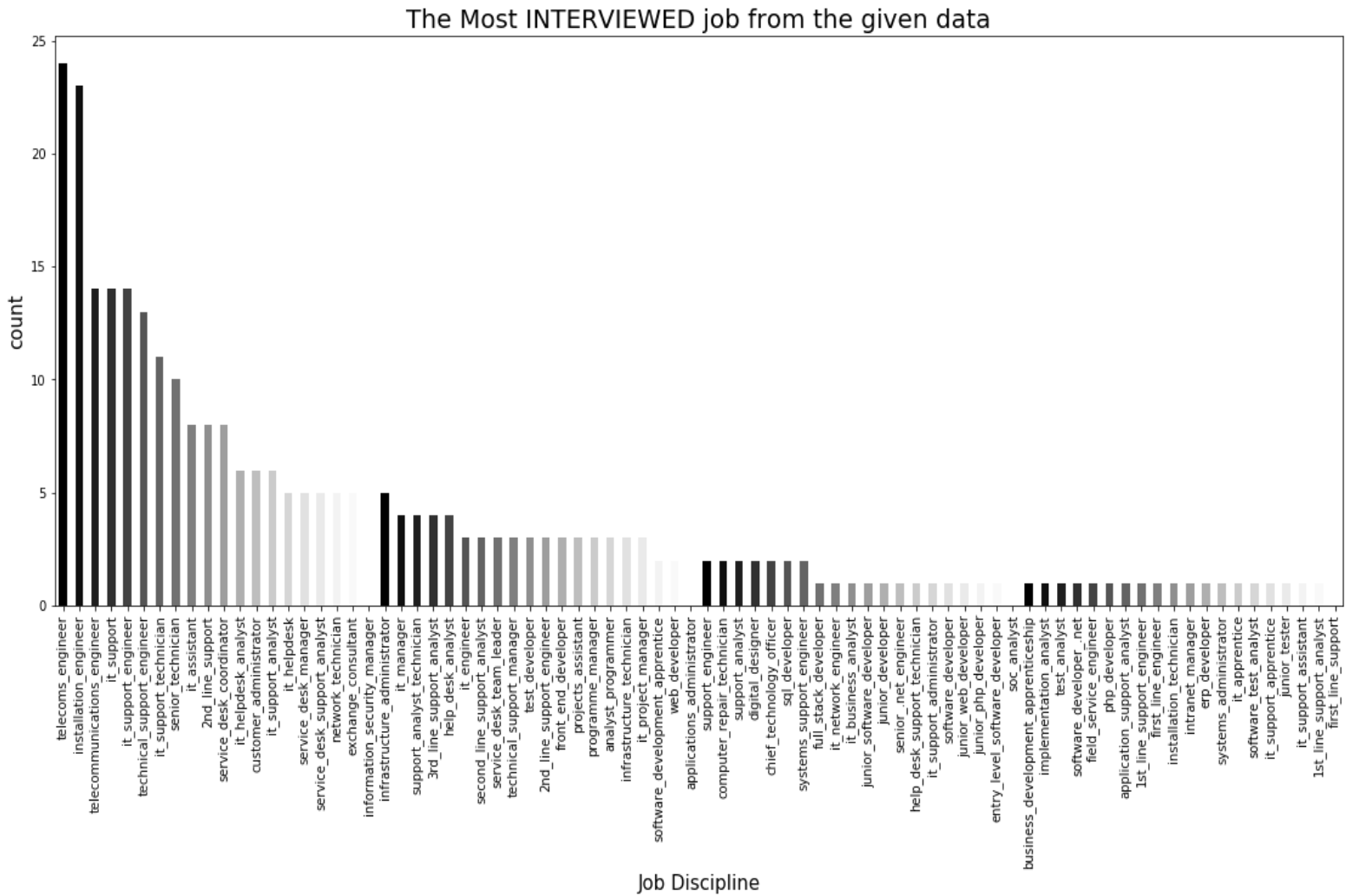
The most Rejected Job for the Given data based on the ATS Status



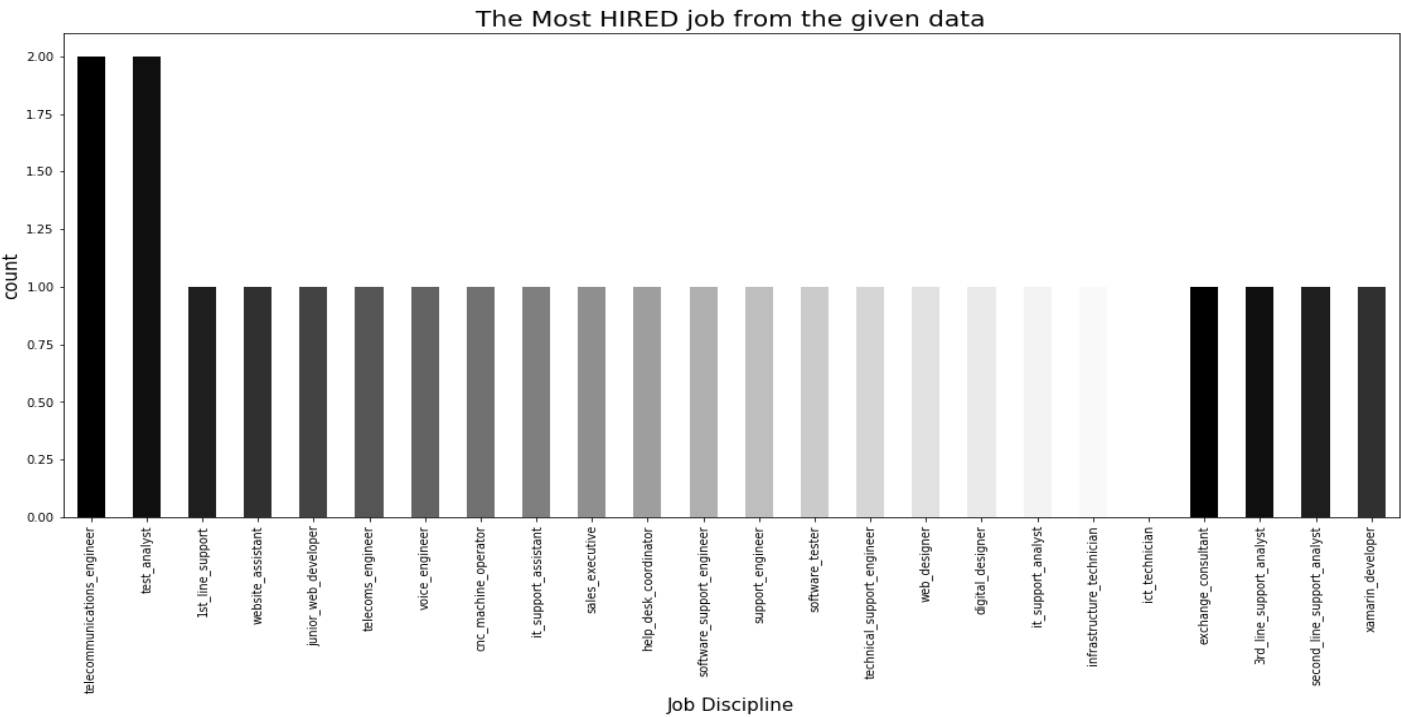
The Most Selected Job based on the ATS Status



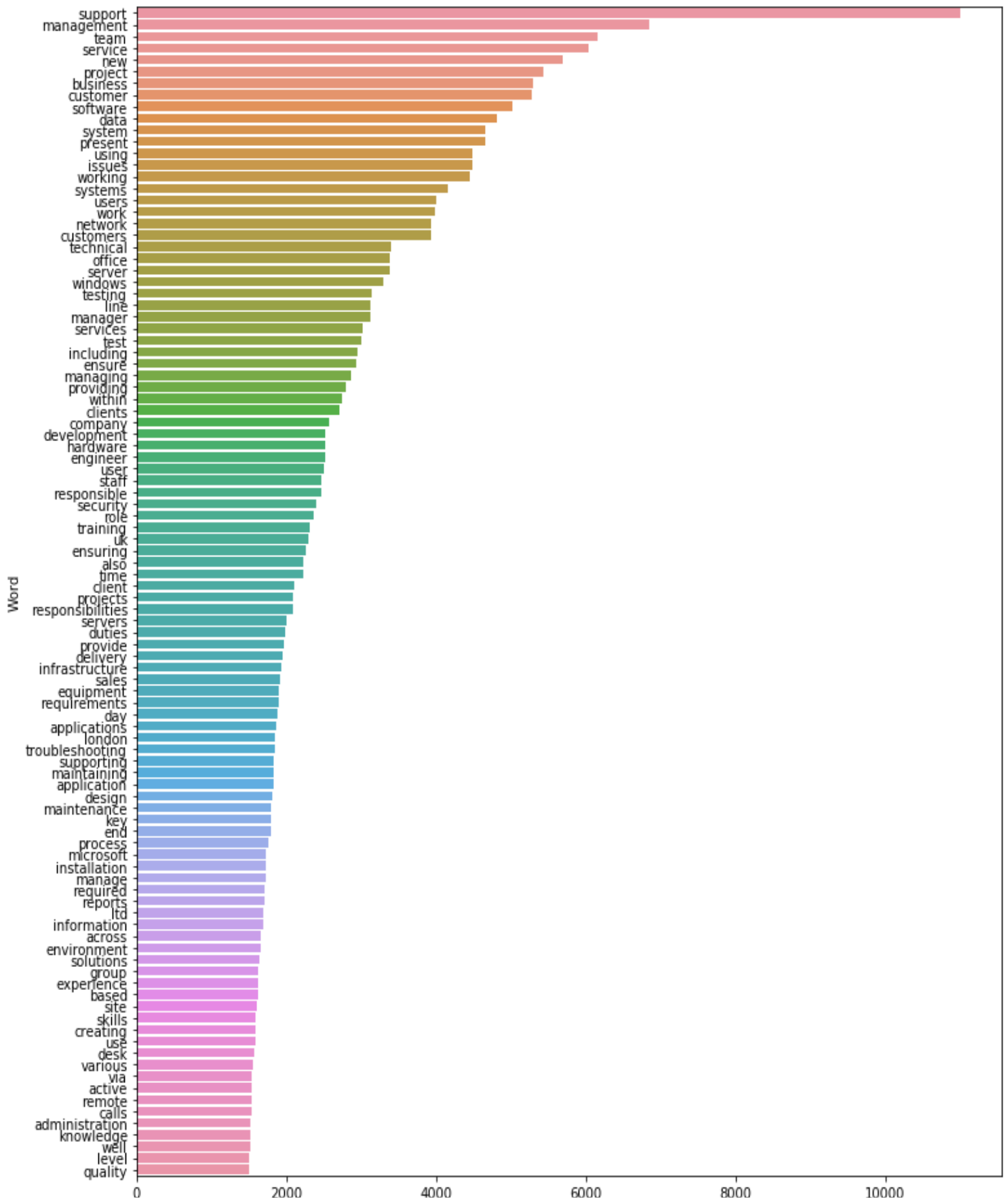
The Most Interviewed Job from the Given data



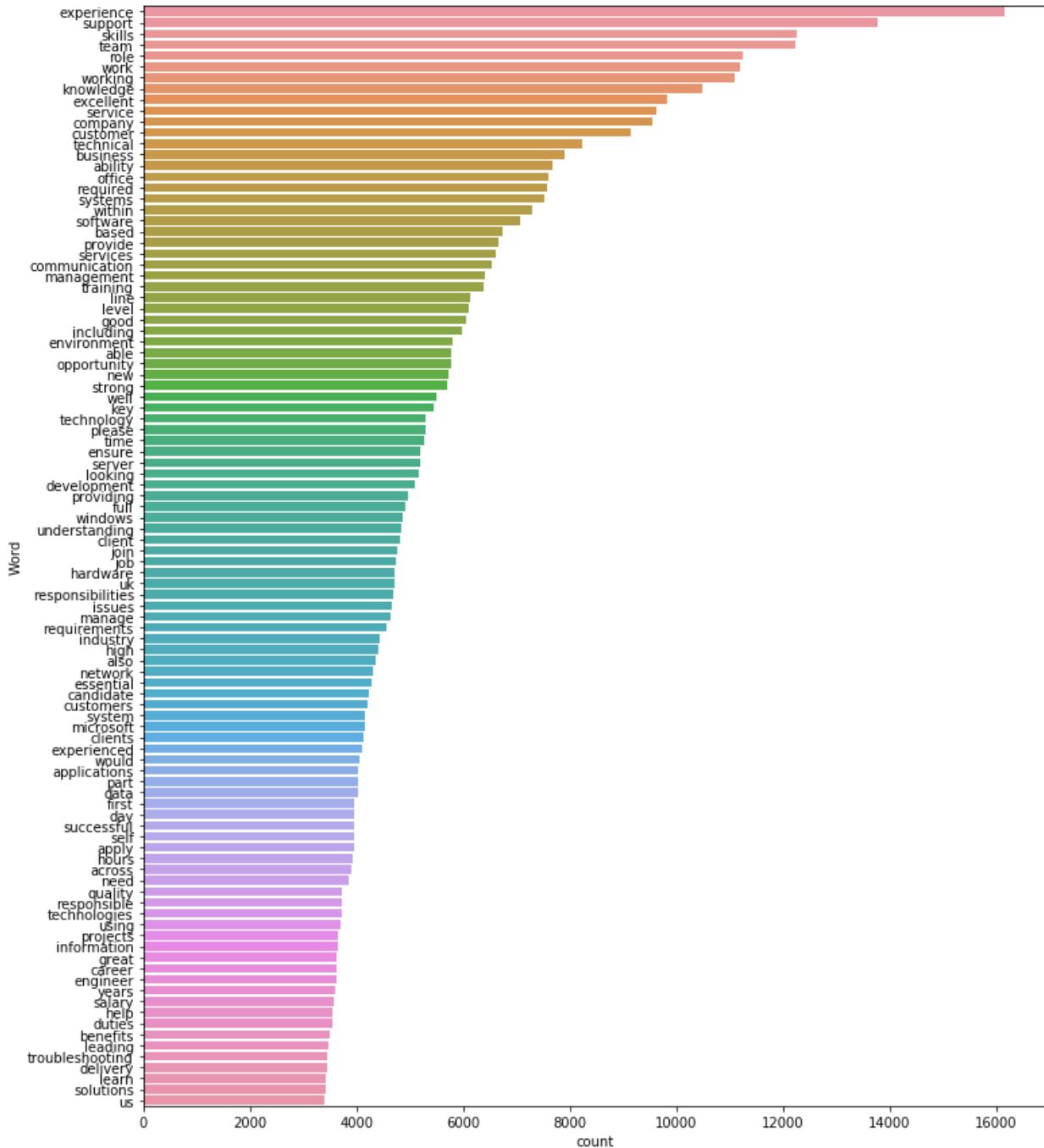
The Most Hired Job based on the ATS Status



Most Frequent word used in the CV Summary



Most Frequent word in the Listing Content



Deploying the NLP Model

For the given dataset, we assume that the ATS Status has been computed from the CV Summary and the experience. For simplicity, we will be considering the CV Summary and computing the ATS Status.

For Word Embedding we would be using the TF-IDF technique,
And for modelling we would be using two models

1. Logistic Regression
2. OneVsRest Classifier

The model yielded the Following metrics :

1. F1 score = 0.7824034334763948
2. Accuracy score = 0.7776355100298762