

HR ANALYTICS

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A detailed description about the project.



About the Data

Introduction to data set that is been used for project.



Insights to find?

What are the objectives and insights that are to be found out?



Steps for EDA and cleaning data

Various steps used for data cleaning and EDA process.



Visual analytics

Different visuals and summaries to understand data well



Key Findings

Insights we found out according to various questions.



Dashboard view

The view of dashboard that is been created

1 OBJECTIVE

OBJECTIVE

Every company has a HR Department which deals with various recruitment and placement related work of the company. Here in this project we have a huge data set in from which we are going to extract insights which can be useful for HR department to work on and to gain knowledge about the recruitment process of the market.

2 PROBLEM STATEMENT

INSIGHTS TO BE FOUND?

- 1 What are total number of jobs available?
- 2 What are total number of companies providing jobs?
- 3 What are total jobs for various domains?
- 4 What are various career level and it's distribution across various jobs?
- 5 What are distribution of jobs across various analytics fields?

INSIGHTS TO BE FOUND?

- 6 Which company is providing highest number of jobs?
- 7 Which domain has the highest number of jobs?
- 8 What are minimum required qualification for job roles?
- 9 What are various job types for different job titles?
- 10 Which are TOP 5 companies with highest jobs?

3 DATA DESCRIPTION

DATA DESCRIPTION

The dataset is about the job details data for analytics industry. The companies in the dataset are Hong Kong based companies. Data consist of various job description for various analytics job roles like Data Scientist, Data analyst, Business Intelligence, Machine Learning Engineer, Data Engineer. The Dashboard made at the end is for the HR Team of a company.

The dataset has 6 separate dataset of different days which was combined to make a final dataset. It is a huge dataset with many columns and other attributes

DETAILS OF DATASET

1

JOB TITLE

The Job Title column contains the name of the jobs given by a particular company.

2

COMPANY

The Company column contains the name of the companies who are providing different types of jobs.

3

SALARY

The Salary column contains the salary for various job roles. Salary column has many null values as many companies do not reveal their salaries publicly.

4

JOB DESCRIPTION

The Job Description column contains the detailed description of the job given by particular companies providing the jobs.

5

CAREER LEVEL

The column contains various career levels like Entry Level, middle level, senior level, etc. based on number of years of experience.

DETAILS OF DATASET

6

QUALIFICATION

The Qualification column contains various educational qualification an individual need for a job for example degree, graduation, post graduation, etc.

7

YEARS OF EXPERIENCE

The Years of Experience column contains the minimum eligibility in terms of experience of years for various job roles

8

JOB TYPE

The Job Type column contains the type of jobs required for example full time, internship, part time, contract, etc.

9

COMPANY WEBSITE

In the company website there are various website links where an individual can apply.

10

INDUSTRY

The Industry column is the domain to which a particular job role belongs for example Finance, HR, IT, etc.

DETAILS OF DATASET

11

SEARCH TERM

The Search Term is the column which contains various analytics domain job belongs to for example Data Science, Data Analytics, BI, ML, etc.

12

DATE POSTED

The Date posted column contains the date when a particular job was posted.

13

DATE SCRAPPED

The Date scrapped column contains the date when the particular dataset was scrapped from some recruitment websites..

STEPS FOR

4 CLEANING DATA AND

EDA

1. REMOVING UNNECESSARY COLUMNS

1

REMOVING LOWER SALARY RANGE & UPPER SALARY RANGE

2

REMOVING DATE SOURCE COLUMN AND OTHER UNNECESSARY COLUMNS

2. REMOVING NULL VALUES AND ERRORS

1

REMOVING NULL VALUES AND ERRORS AND MISSING VALUES FROM COLUMNS

There are various null values, errors and missing values in the columns which we can delete.

2

REMOVING NOT SPECIFIED VALUES FROM THE COLUMNS

There are many columns which has the value Not Specified values which are of no use and can create problem while changing data types and other calculations hence we will remove that values from the data set.

3. REPLACING VALUES

1

REPLACING VALUES IN EXPERIENCE COLUMN

The Experience table was having a value -1 which was suppose to be 1 so changed the value -1 to 1 using Replace Value option.

2

REPLACING VALUE IN QUALIFICATION COLUMN

The Qualification column has two qualification name Non-Degree Tertiary and Non Degree Tertiary so we can replace Non Degree Tertiary with Non-Degree Tertiary as they represent same qualification.

3

JOB TYPE

The Job Type column contains the type of jobs required for example full time, internship, part time, contract, etc.

5

**VISUAL
ANALYTICS
AND FINDINGS**

SUMMARY OF DATA

Total Career Level

3

Total analytics field

5

Total Job Types

35

COMPANY AND DOMAIN WITH HIGHEST NUMBER OF JOBS



HKT and Michael Page are the companies with highest number of Job Titles. They both have 25 jobs.



Human Resources Management/Consultancy is the domain with highest number of jobs, with 482 different jobs.

TOP 5 COMPANIES AND TOTAL JOBS

RANK	NAME OF THE COMPANIES	TOTAL JOBS
1	IT Solutions Limited	43
2	Robert Walters (HK)	40
3	Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI)	37
4	Manpower Services (Hong Kong) Limited	31
5	Pinpoint Asia Limited	29

CAREER LEVEL

Total Career Level

3

Career level is the type of job work you are going to get according to years of experience you have.

There are three types of Career Level that are:

1

Entry Level
Jobs

Entry level jobs are the job level for fresher's or people entering a new domain.

2

Middle Level
Jobs

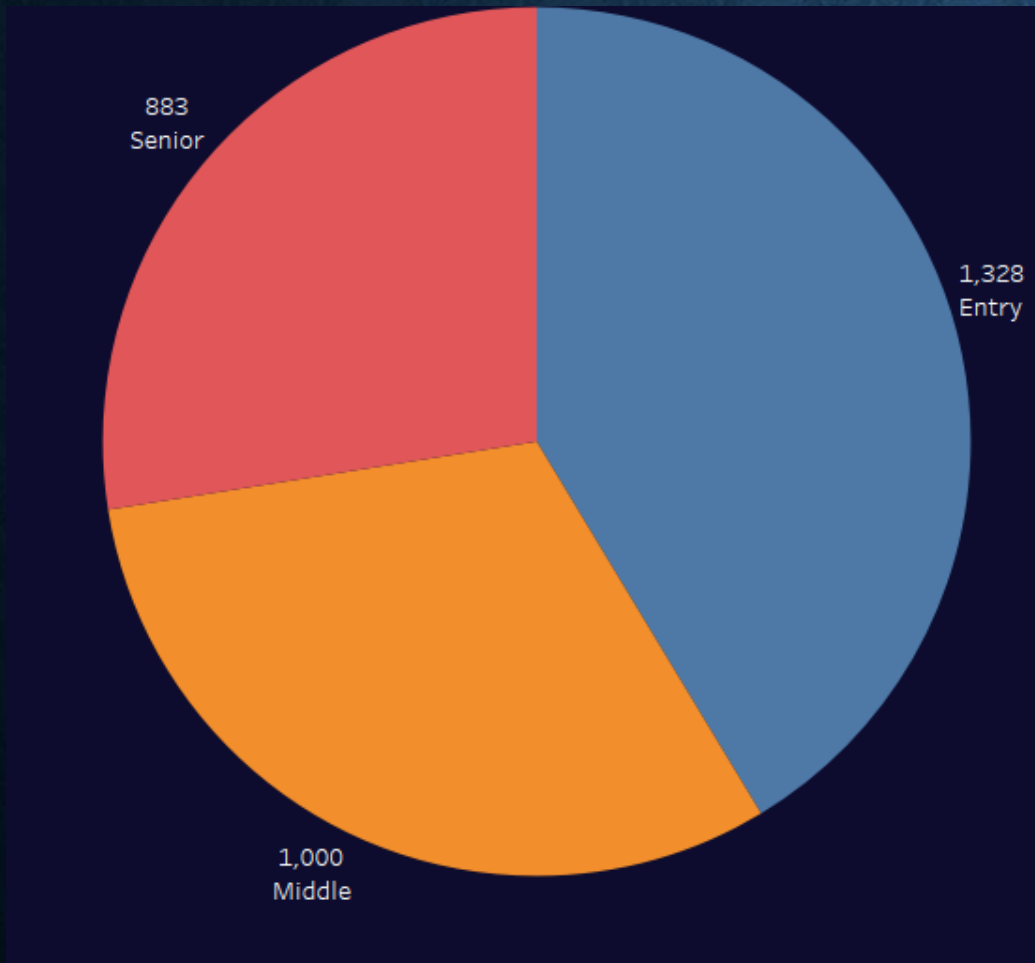
Middle level jobs are the job level for the people with some years of experience in a particular domain.

3

Senior Level
Jobs

Senior Level jobs are the job level for the people who have many years of experience in particular domain and they can work for higher job post like manager, etc.

VARIOUS JOB TYPES FOR DIFFERENT JOB TITLES



KEY INSIGHTS

There are various career level according to requirement of the job. Career level depends upon the years of experience of an individual.

According to the visual **Entry Level Jobs** shares 35.22% of job share. **Middle Level Jobs** has the highest shares with 51.24%. **Senior Level Jobs** has 13.54%.

Companies has various job types for various job titles.

VARIOUS JOB TYPES FOR DIFFERENT JOB TITLES



ENTRY LEVEL JOBS



Company with highest number of Entry Level job is [Talent Fields Hong Kong company Limited](#), with 21 Entry Level Jobs.

MIDDLE LEVEL JOBS



Company with highest number of Middle Level job is [IT Solutions Limited](#), with 23 Middle Level Jobs.

SENIOR LEVEL JOBS



Company with highest number of Senior Level job is [Hong Kong Applied Science and Technology Research Institute Company Limited \(ASTRI\)](#) with 31 senior level jobs

JOB ROLES LEVEL

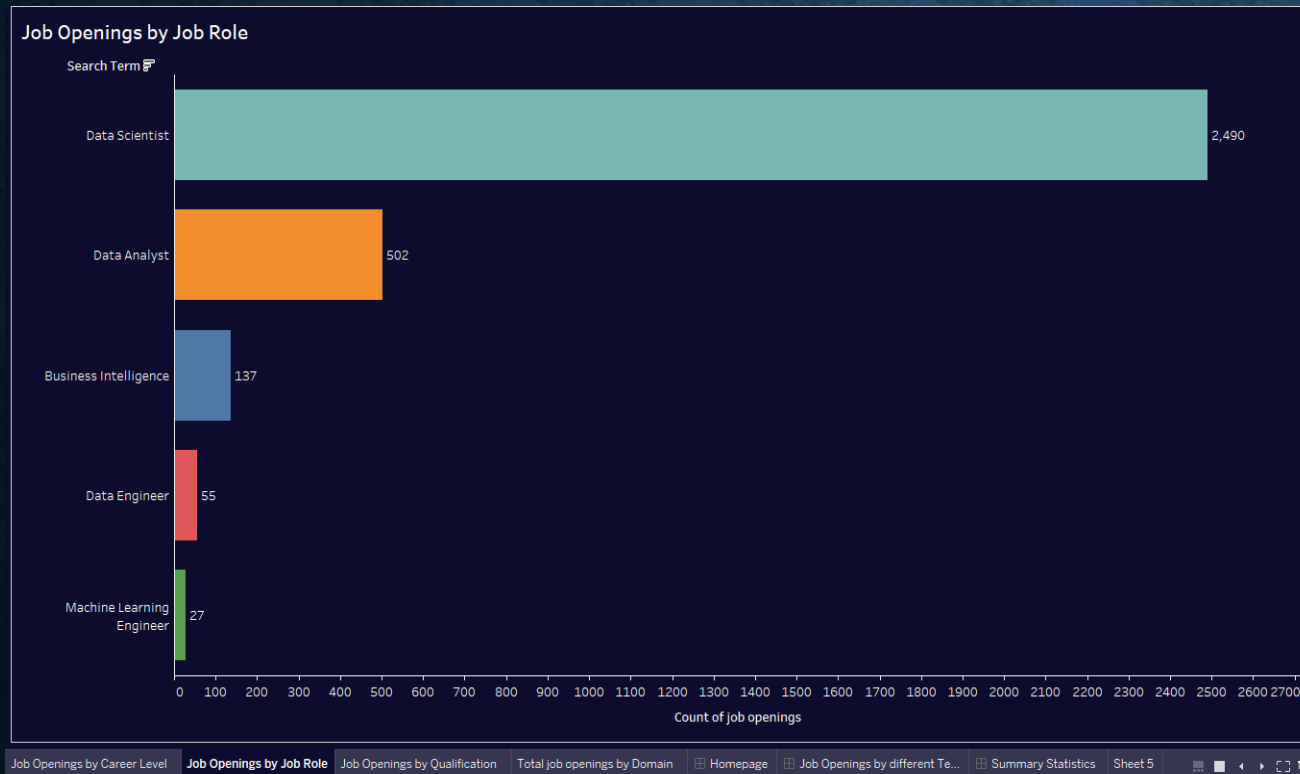
Total Analytics field

5

There are five types of Career Level that are:

- 1 Data Scientist Jobs
- 2 Data Analyst Jobs
- 3 Data Engineer Jobs
- 4 Business Intelligence Jobs
- 5 Machine Learning Engineer Jobs

JOB ROLE ANALYSIS



Data Science

2490

Data Analyst

502

BI

137

Data Engineer

55

ML Engineer

27

KEY INSIGHTS

From the above graph we can observe that the **Data Scientist** has highest number of job roles with **2490 jobs** and **Machine Learning Engineer** has least that is **27 jobs**. Second highest is **data analyst** with **502 job roles**. **Business Intelligence** and **Data Engineer** are close with **137** and **55** job roles.

COMPANY WISE INSIGHTS



IT solutions Limited is the highest job opening in data scientist role.



IT solution Limited is the highest in data analyst role.



Many industries has only single job requirement in data engineer job Many



industries has only single job requirement in data engineer job role.



Many industries has only single job requirement in business intelligence job role.

KEY INSIGHTS

Most of the companies prefer Data Scientist and Data analyst jobs because rest of the job roles are covered in both the job roles

DOMAIN WISE INSIGHTS



Information Technology domain is the highest which has 625 job opening in data science job role.



Human Resources/Consultancy domain is the highest which has 137 job opening in data analyst job role.



Information Technology domain is the highest which has 17 job opening in data engineer job role.



Information Technology domain is the highest which has 9 job opening in machine learning engineer role.



Human Resources/Consultancy domain is the highest which has 22 job opening in business intelligence role.

ENTRY LEVEL WISE INSIGHTS



Data Scientist has 1033 entry level jobs.



Data Analyst has 214 entry level jobs



Data Engineering has 22 entry level jobs



Machine Learning Engineering has 8 entry level jobs.



Business Intelligence has 51 entry level jobs.

MIDDLE LEVEL WISE INSIGHTS



Data Scientist has 785 middle level jobs.



Data Analyst has 147 middle level jobs. Data



Engineering has 18 middle level jobs.



Machine Learning Engineering has 12 middle level jobs.



Business Intelligence has 38 middle level jobs.

SENIOR LEVEL WISE INSIGHTS



Data Scientist has 672 senior level jobs.

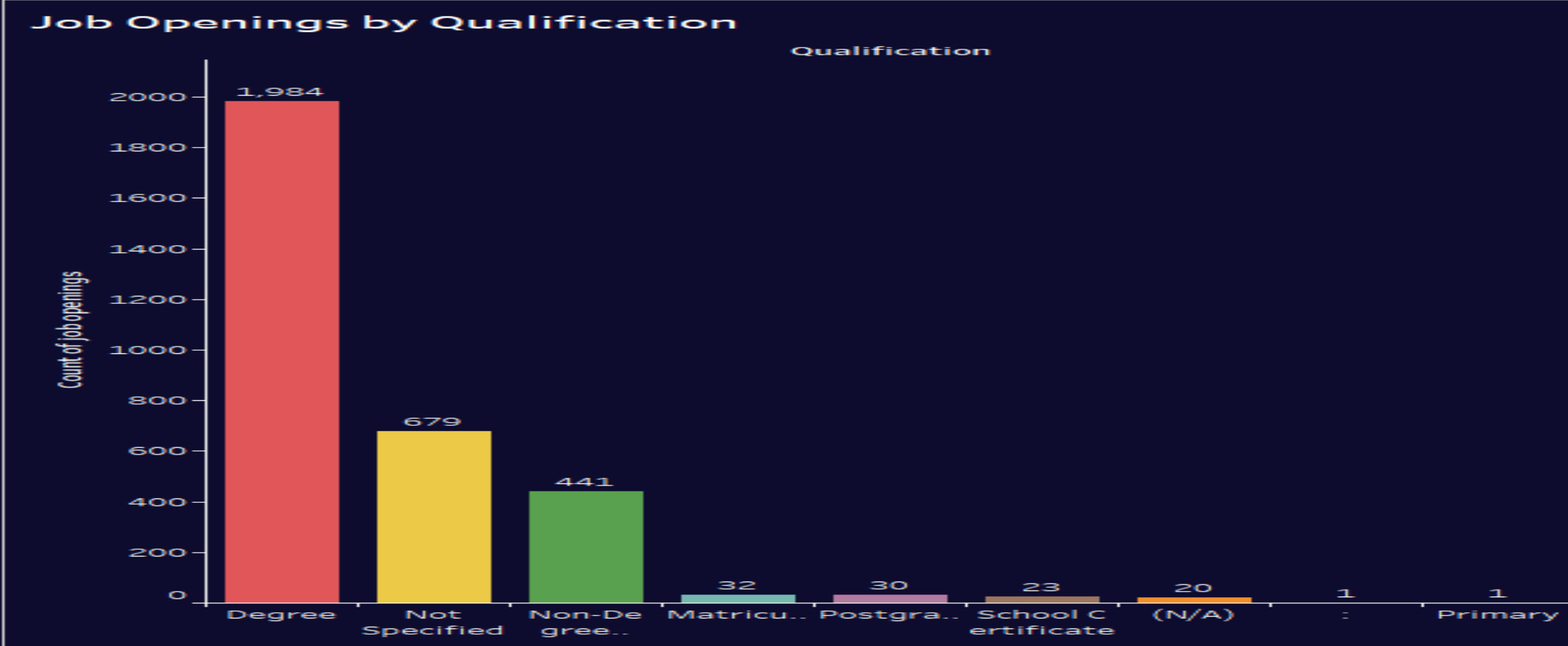


Data Analyst has 141 senior level jobs.



Business Intelligence has 48 senior level jobs, followed by Data Engineer having 15 and Machine Learning Engineer having 7 jobs respectively.

REQUIRED QUALIFICATION FOR JOBS



KEY INSIGHTS

From the above visual we can observe that the more companies require a Degree for various roles. Comparison to Non-Degree its not even half of the Degree. There are also other qualification involved such as Matriculated, Post Graduation and School Certificates.

6

KEY INSIGHTS

INSIGHTS TO BE FOUND?

- 1 There are **3211 jobs** available for Data Science.
- 2 **1223 companies** are providing jobs for Data Science .
- 3 There are around **51 different domains** in which jobs are provided for DS.
- 4 **IT Solutions Limited** and **Robert Walters(HK)** are the companies which has highest job opening.
- 5 **Human Resources Management/Consulting** is the domain which has on an average highest number of jobs.

INSIGHTS TO BE FOUND?

- 6 Entry level jobs has the highest openings.
- 7 Data Scientist has highest job titles followed by Data analyst.
- 8 ML Engineer has the least job titles.
- 9 Most companies prefer individuals with degree for their job roles
- 10 Most job types are temporary contract based.

7 DASHBOARD

HR & RECRUITMENT DASHBOARD



No. of Jobs

3,211



No. of Companies

1,223

Job Openings by different Terms

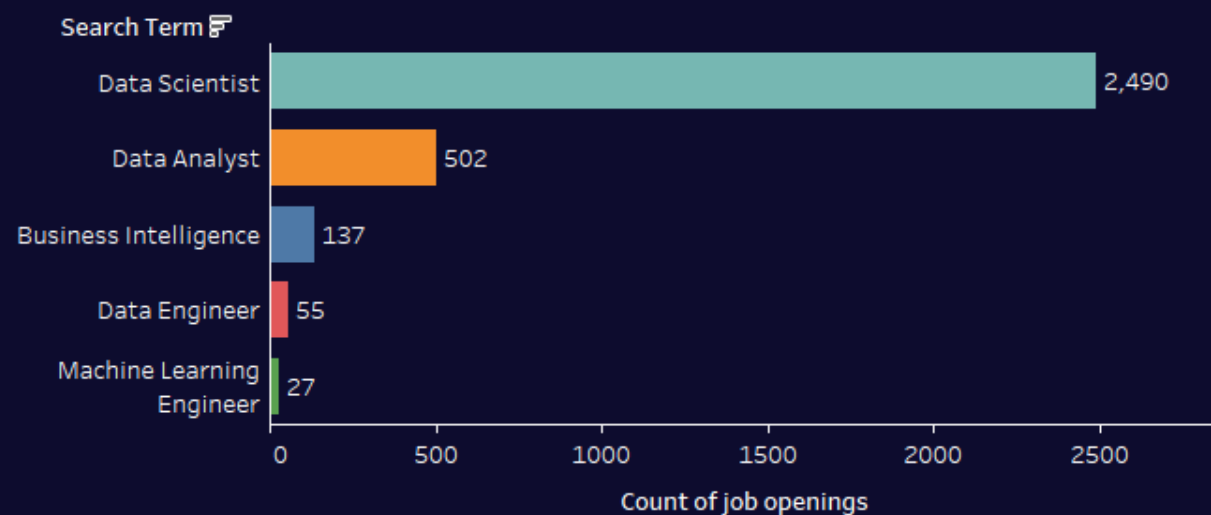
Summary Statistics



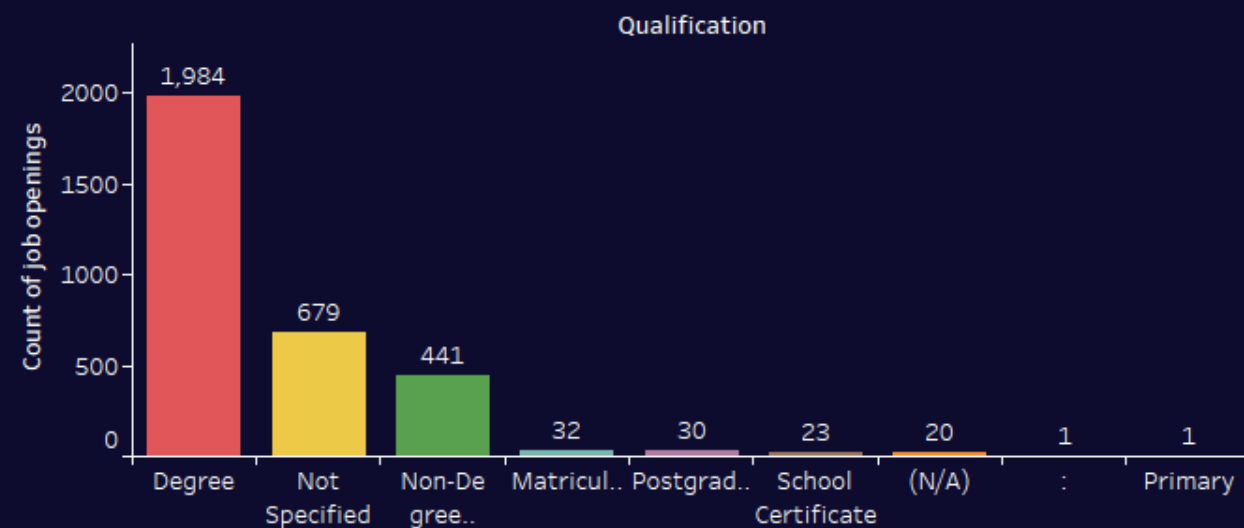
Job Openings by different Terms



Job Openings by Job Role



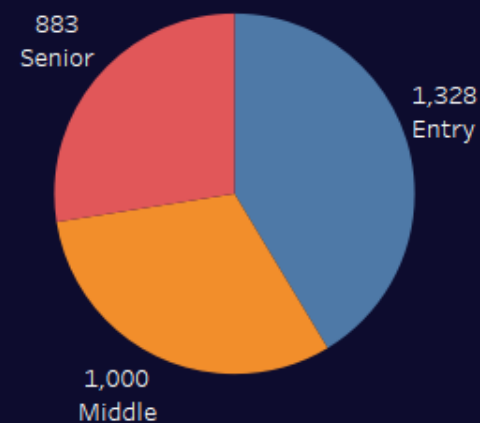
Job Openings by Qualification



Total job openings by Domain



Job Openings by Career Level





SUMMARY STATISTICS

Total Jobs



3211

Total Job Types



41

Total Companies



1223

Total Domains



51

Entry Level Jobs



1328

Middle Level Jobs



883

Sr. Level Jobs



1000

Data Scientist Jobs



2490

Data Analyst Jobs



502

B.I Jobs



137

Data Engineer Jobs



55

ML Engineer Jobs



27



THANK YOU



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