

JOB ANALYTICS

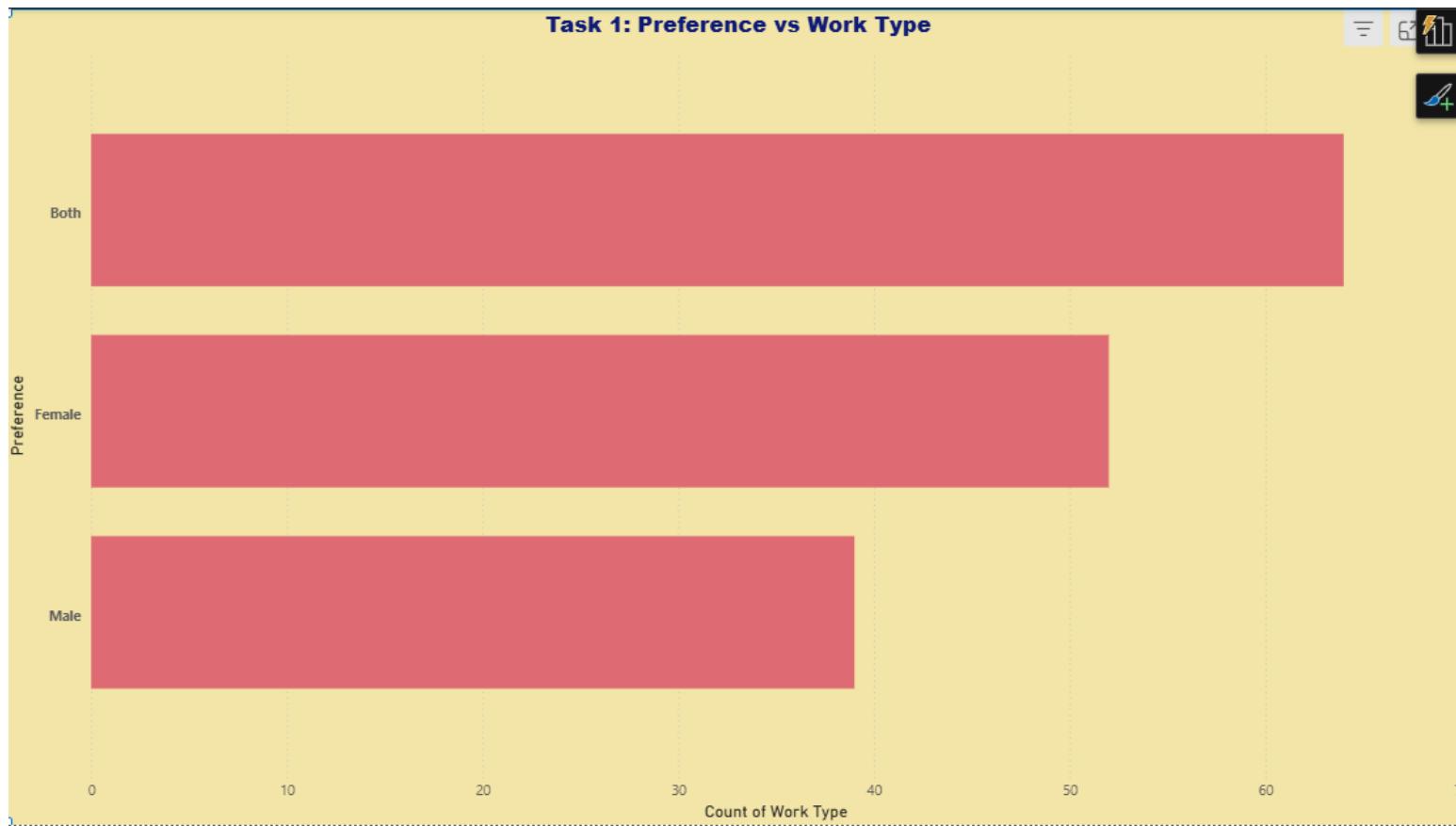
DOMAIN – DATA ENGINEERING
TOOL – Power BI

TASK – 1

Preference vs Work Type (Intern – Bar Chart)

Objective

Analyze internship job postings by Preference under specific geographic, salary, and experience constraints.



Key Filters

- Work Type: Intern
- Latitude < 10
- Company Size < 50,000
- Salary > \$9,000
- Experience: even numbers only
- Job Posting Month: odd months

Visualization

- Horizontal bar chart
- X-axis: Count of Work Type
- Y-axis: Preference
- Sorted in descending order

The screenshot shows the Power BI Filter pane with several filters applied to a visual:

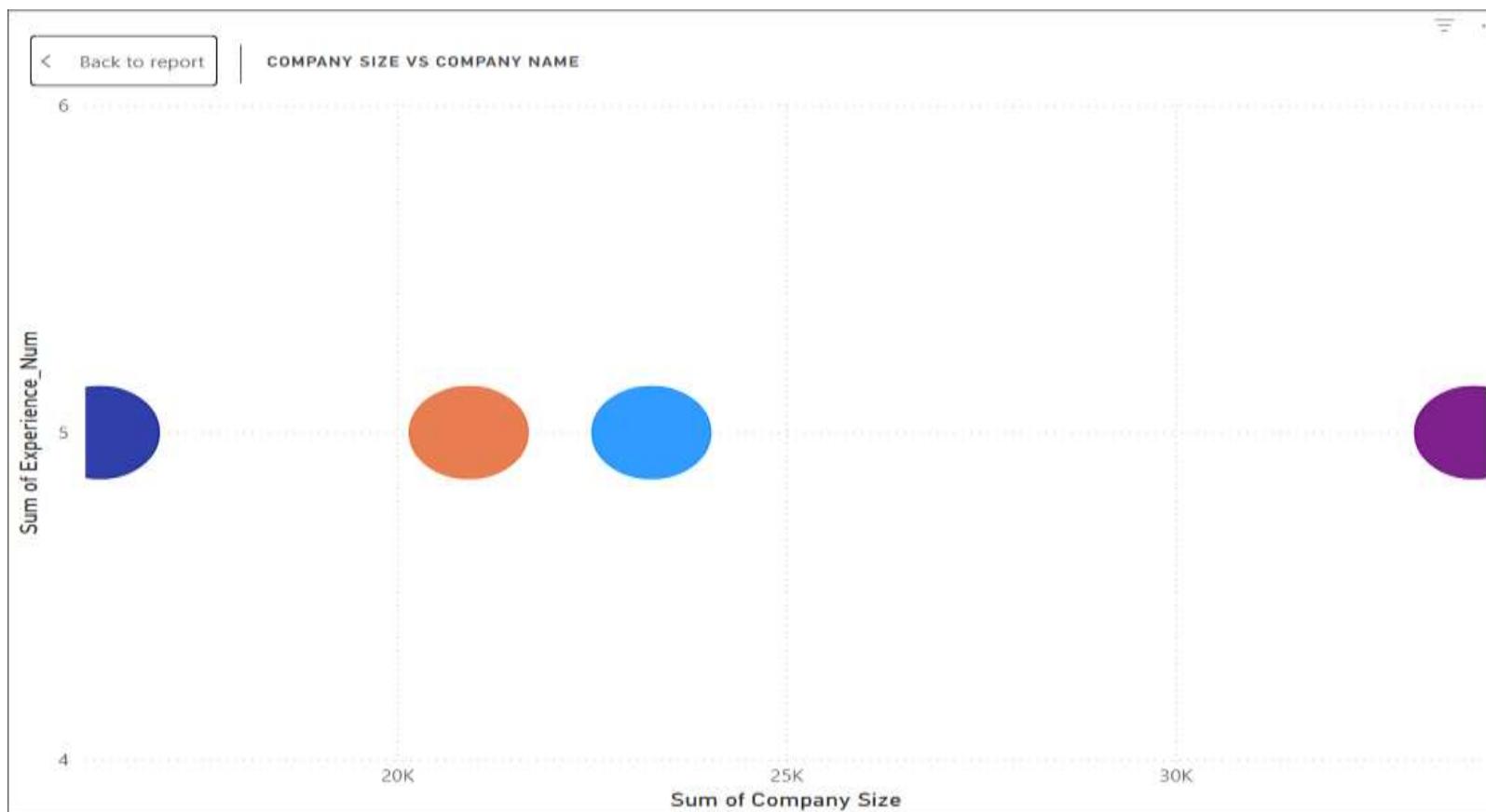
- Filters on this visual:**
 - Count of Work Type is (All)
 - Filter_Experie... is 1
 - Filter_Month is 1
 - latitude is less than 10
 - Filter_Title is 1
 - Preference is (All)
 - Salary Range is (All)
- Suggestions:** A grid of icons representing various data visualization and analysis functions.
- Build:** A section containing:
 - Y-axis:** Preference (with an **+Add data** button)
 - X-axis:** Count of Work... (with an **+Add data** button)
 - Legend:** (with an **+Add data** button)
 - Small multiples:** (with an **+Add data** button)
- Data:** A list of columns from the "jobs.csv" file, with "Preference" checked.

Task - 2

Company Size vs Company Name (Scatter Plot)

Objective

Analyze the relationship between company size and company name for Mechanical Engineer roles under strict job, demographic, and geographic constraints.



Key Filters

- Job Title: Mechanical Engineer
- Company Size < 50,000
- Experience > 5 years
- Salary > \$50,000
- Country: Asia (excluding countries starting with "I")
- Work Type: Full-Time or Part-Time
- Preference: Male
- Job Portal: Idealist
- Company Name: at least 2 vowels

Visualization

- Scatter Plot
- X-axis: Company Size
- Y-axis: Company Name

The screenshot shows the Power BI Filter pane open, displaying various filters applied to a visual. The filters include:

- Company**: is (All)
- Company Size**: is less than 50000
- Count of Salary Ra...**: is (All)
- Country**: does not start with...
- Experience**: is 5 to 10 Years, 5 t...
- First Company**: is (All)
- Job Portal**: is Idealist
- Job Title**: (empty)

The pane also shows a list of available fields from the data source "jobs csv":

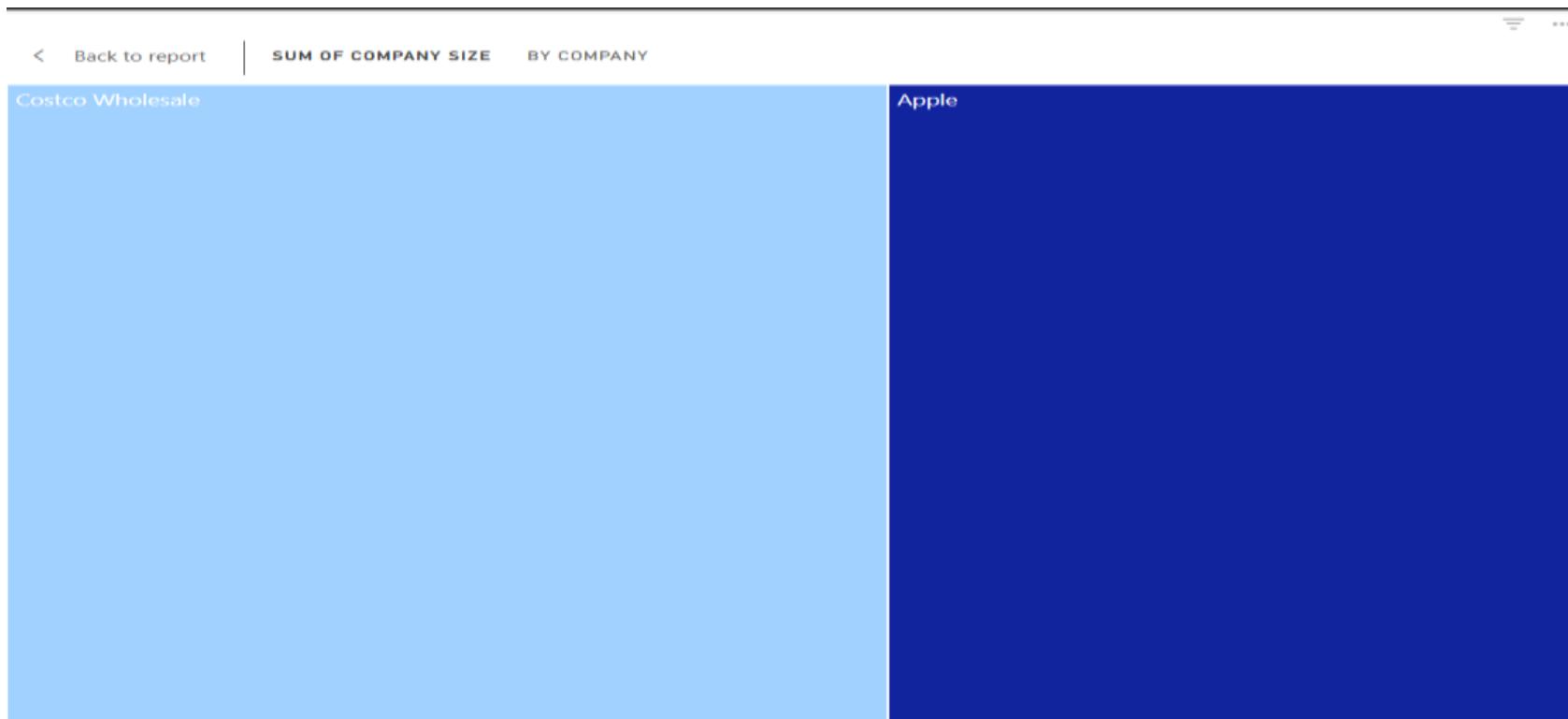
- Benefits
- Company (selected)
- Company Prof...
- Σ Company Size (selected)
- Company_Index
- Contact
- Contact Person
- Country
- Experience
- Σ Experience_N...
- Job Description
- Σ Job Id
- Job Portal
- Job Posting D...
- Job Title
- Σ latitude
- location
- Σ longitude
- Preference
- Qualifications
- Responsibilities

Task - 3

Top 10 Companies (Tree Map)

Objective

Identify the top 10 companies hiring for Data Engineer and Data Scientist roles under specific qualification, location, and posting constraints.

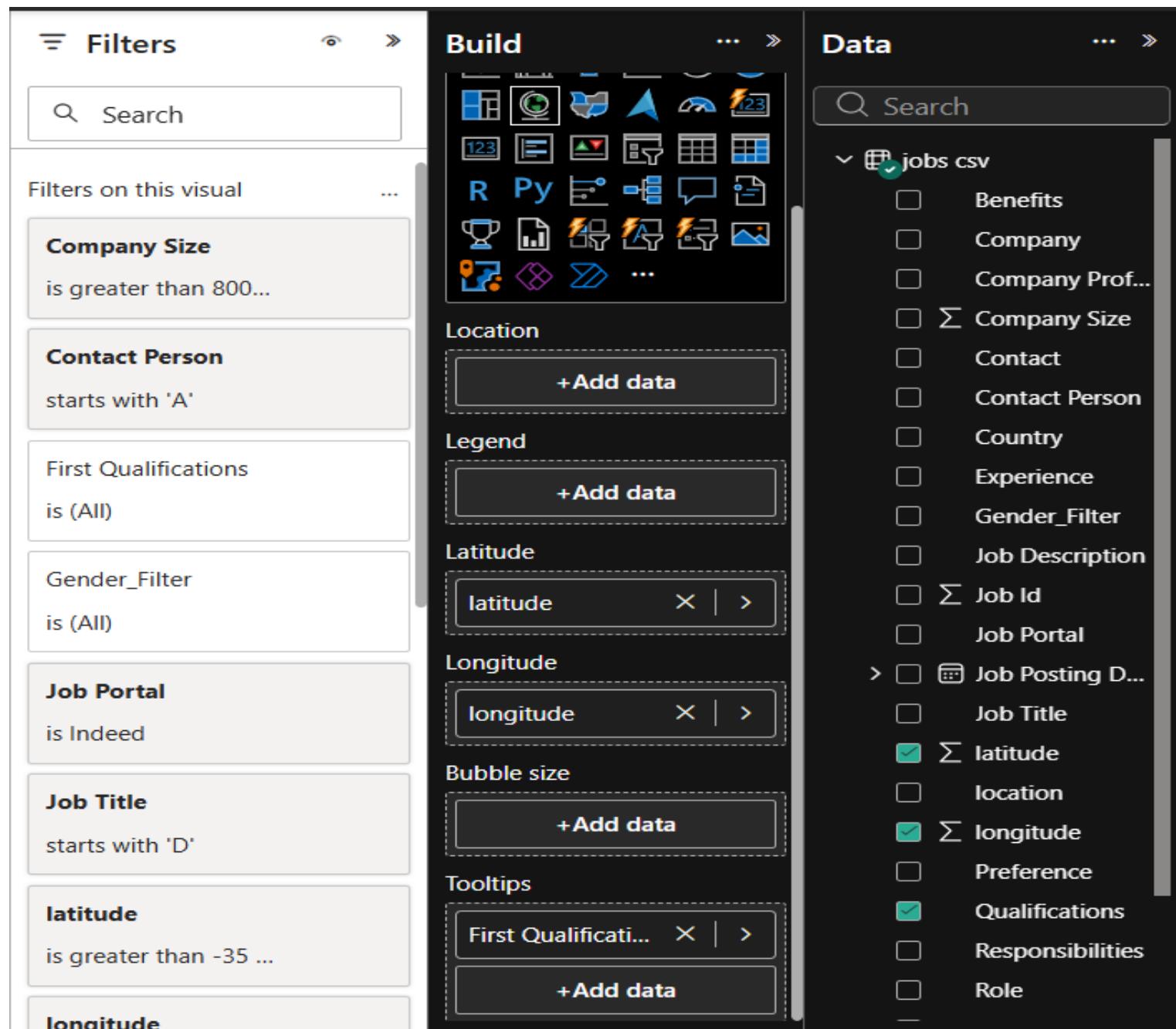


Key Filters

- Role: Data Engineer
- Job Title: Data Scientist
- Exclude Asian countries
- Exclude countries starting with “C”
- Latitude < 10
- Preference: Female
- Qualification: B.Tech
- Company Size $\geq 10,000$
- Job Portal: LinkedIn
- Job Posting Date: 01/01/2023 – 06/01/2023
- Contact Person: ends with a vowel

Visualization

- Tree Map
- Values: Company Count
- Category: Company Name (Top 10)

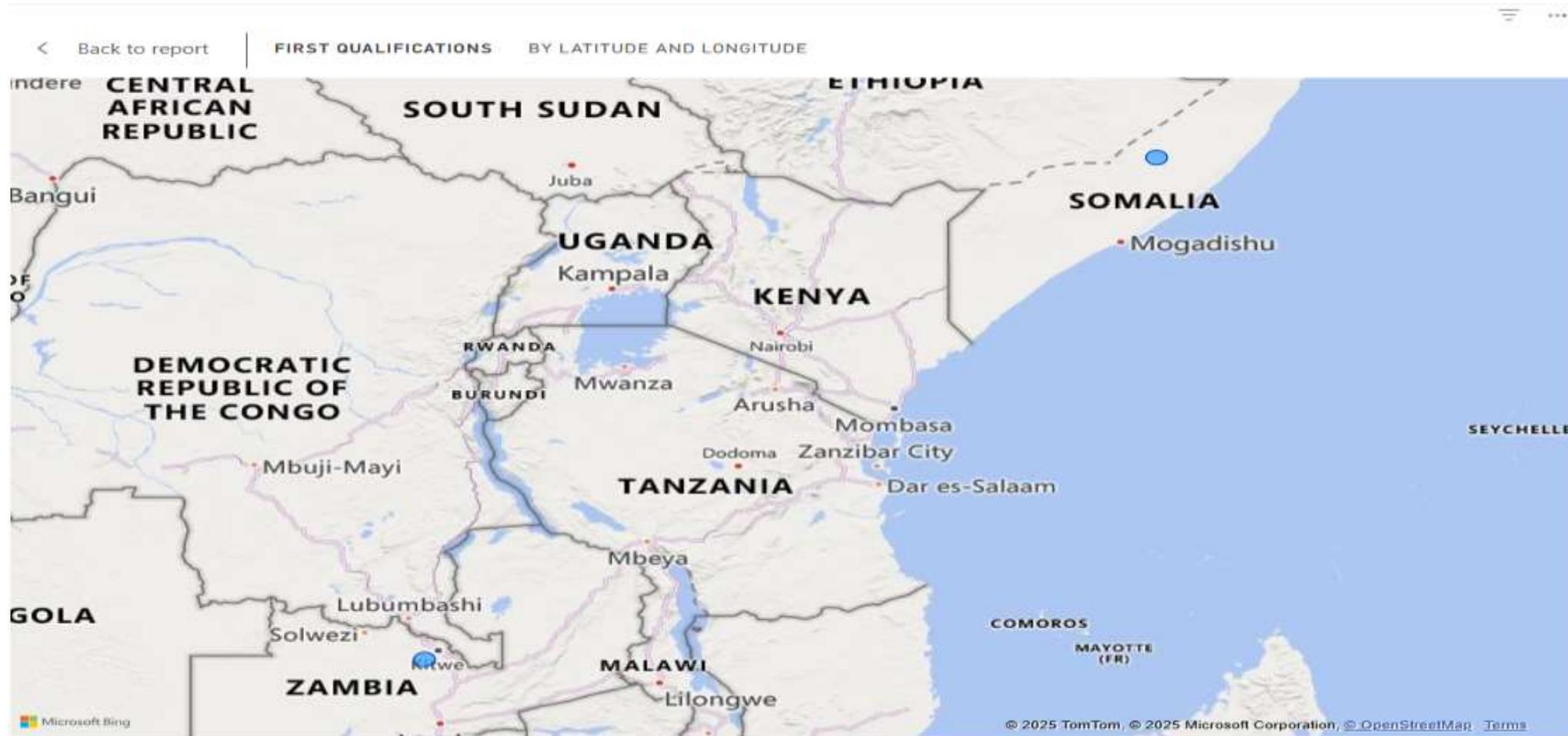


Task - 4

Qualification Drilldown Map (Map with Click)

Objective

Visualize job postings in Africa based on qualification and company size using an interactive drilldown map.



Key Filters

- Qualification: B.Tech, M.Tech, PhD
- Work Type: Full-Time
- Country: Africa only
- Job Title starts with “D”
- Preference: Male
- Company Size > 80,000
- Contact Person starts with “A”
- Job Portal: Indeed
- Salary > \$20,000

Visualization

- Map using Latitude & Longitude
- Drilldown enabled for detailed location view

The screenshot displays the Power BI interface with three main sections: Filters, Build, and Data.

Filters: A search bar at the top, followed by a list of applied filters:

- Company_Len... is greater than 800...
- Count of Job Title is (All)
- Country is Germany or India
- Experience_N... is greater than 2
- Job Portal is Indeed
- Job Posting Da... is (All)
- Job Title is Aerospace Engin...
- location

Build: A section titled "Suggestions" containing various chart and visualization icons. It includes dropdowns for "Y-axis" (set to "Country") and "X-axis" (set to "Count of Job T..."). Other options include "Legend", "Small multiples", and "Tooltips".

Data: A list of data sources and fields:

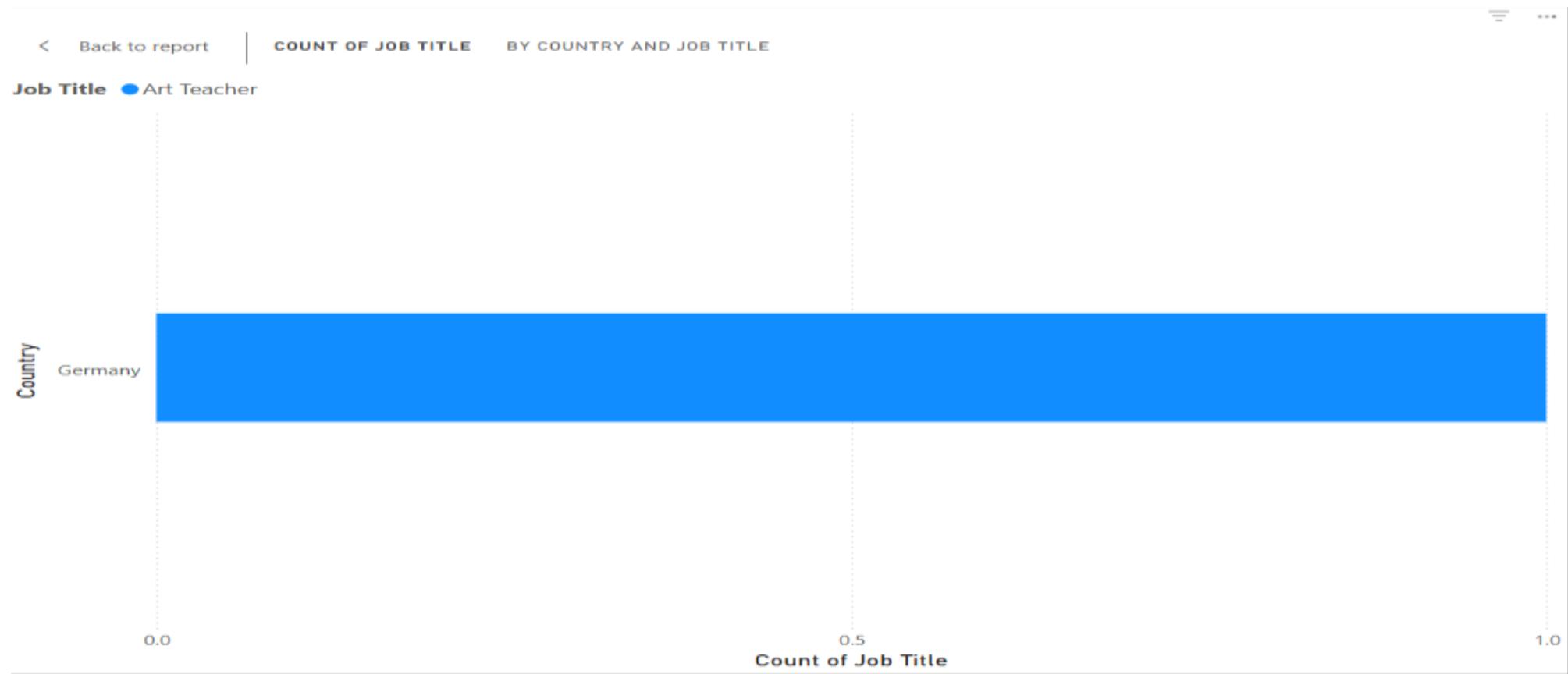
- jobs csv
 - Benefits
 - Column
 - Company
 - Company Prof...
 - Σ Company Size
 - Company_Len...
 - Contact
 - Contact Person
 - Country
 - Σ Experience_N...
 - Job Description
 - Σ Job Id
 - Job Portal
 - Job Posting D...
 - Job Title
 - Σ latitude
 - location
 - Σ longitude
 - Preference
 - Qualifications
 - Responsibilities

Task – 5

India vs Germany Comparison (Stacked Bar Chart)

Objective

Compare job postings between India and Germany based on qualification, experience, and job role using a stacked bar chart.



Key Filters

- Countries: India and Germany
- Qualification: B.Tech
- Work Type: Full-Time
- Experience > 2 years
- Job Titles: Data Scientist, Art Teacher, Aerospace Engineer
- Salary > \$10,000
- Preference: Female
- Job Portal: Indeed
- Job Posting Date: before 08/01/2023
- Location: not blank
- Company Name: more than 8 characters

Visualization

- Stacked Bar Chart
- India: Orange
- Germany: Green

The screenshot shows the Power BI Filter pane with several filters applied and a large list of suggestions.

Applied Filters:

- Company_Len...**: is greater than 800...
- Count of Job Title**: is (All)
- Country**: is Germany or India
- Experience_N...**: is greater than 2
- Job Portal**: is Indeed
- Job Posting Da...**: is (All)
- Job Title**: is Aerospace Engin...
- location**

Suggestions:

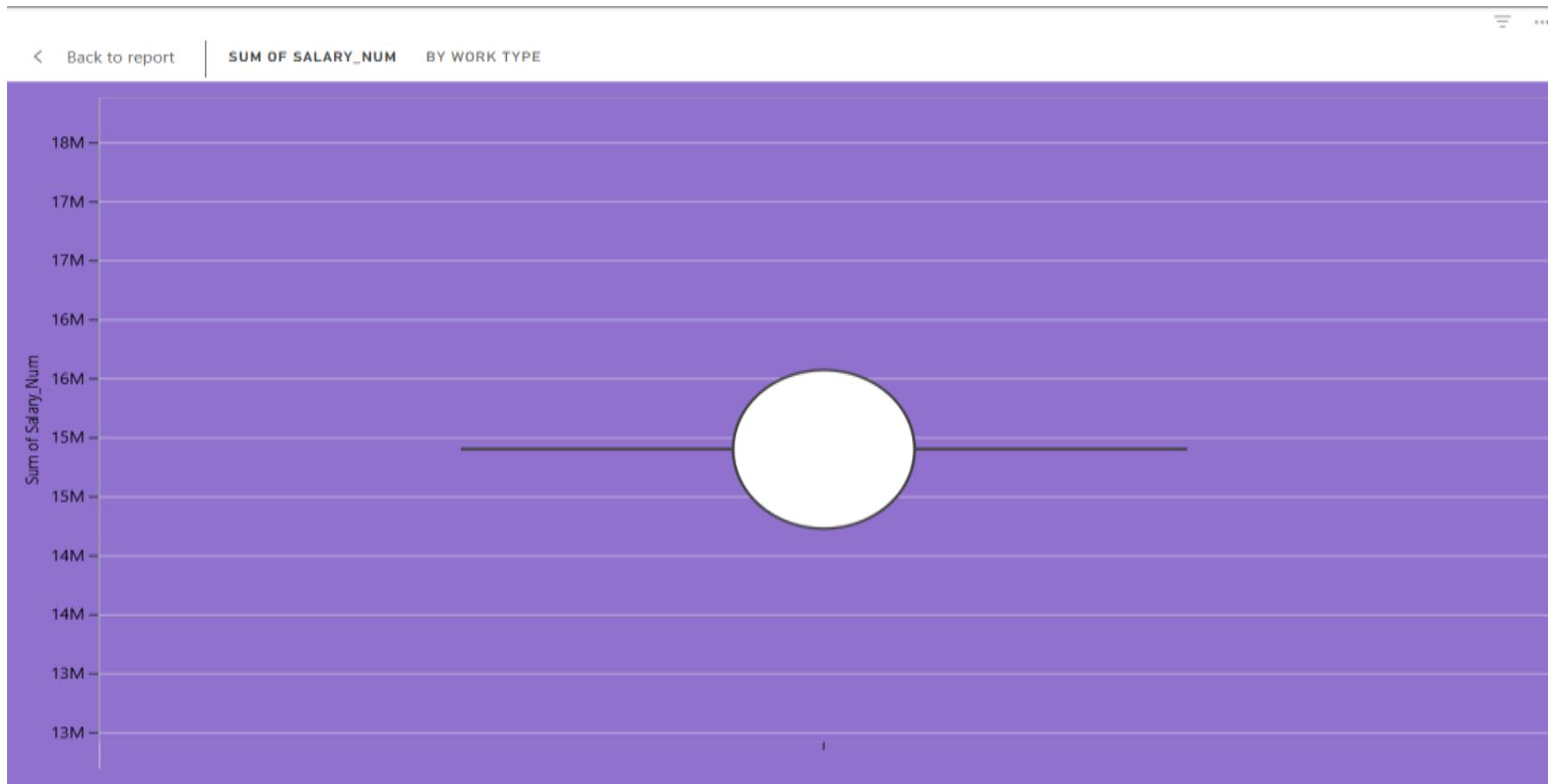
- Filters**: Search bar and "Filters on this visual" section.
- Build**: Suggestion cards for various visualizations like Stacked Bar Charts, Line Charts, etc., grouped under "Suggestions".
- Data**: A list of data items from the "jobs csv" table:
 - Benefits
 - Column
 - Company
 - Company Prof...
 - Σ Company Size
 - Company_Len...
 - Contact
 - Contact Person
 - Country** (selected)
 - Σ Experience_N...
 - Job Description
 - Σ Job Id
 - Job Portal
 - Job Posting D...
 - Job Title** (selected)
 - Σ latitude
 - location
 - Σ longitude
 - Preference
 - Qualifications
 - Responsibilities

Task - 6

Work Type Salary Distribution (Box Plot)

Objective

Analyze salary distribution for internship roles under geographic, experience, and company constraints using a box plot.



Key Filters

- Work Type: Intern
- Latitude < 10
- Country not starting with A, B, C, or D
- Job Title: single word, fewer than 10 characters
- Company Size < 50,000
- Salary > \$8,000
- Experience: even numbers only
- Job Posting Date: between 2021 and 2023
- Contact Person: contains letter “e”

Visualization

- Box-and-Whisker Plot
- X-axis: Work Type
- Y-axis: Salary Range

The screenshot shows the Power BI Filter pane open, displaying various filters applied to a visual. The filters include:

- Company Size: is less than 50000
- Country_OK: is TRUE
- Experience_Ev...: is 1
- Has_E: is TRUE
- Job Posting Da...: is (All)
- JobTitle_Leng...: is 9 or 7
- JobTitle_Word...: is 1
- latitude

The pane also shows a "Suggestions" section with icons for different chart types and a "Data" section listing columns from a "jobs csv" file, many of which have checkboxes next to them.

Data Column	Status
Benefits	unchecked
Company	unchecked
Company Prof...	unchecked
Σ Company Size	unchecked
Contact	unchecked
Contact Person	unchecked
Country	unchecked
Country_OK	unchecked
Σ Experience_Ev...	unchecked
Experience_N...	unchecked
Has_E	unchecked
Job Description	unchecked
Σ Job Id	unchecked
Job Portal	unchecked
Job Posting D...	unchecked
Job Title	unchecked
JobTitle_Length	unchecked
JobTitle_Word...	unchecked
Σ latitude	unchecked
location	unchecked
Σ longitude	unchecked