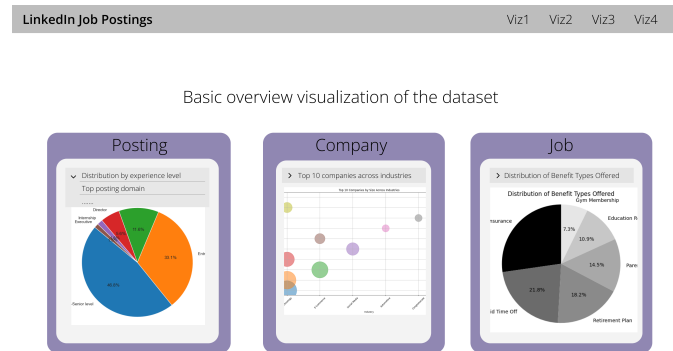


Milestone 2 - LinkedIn Job Postings

Group RYL - Lluka Stojollari, Renqing Cuomao, Yunlong Dong

1 VISUALIZATION

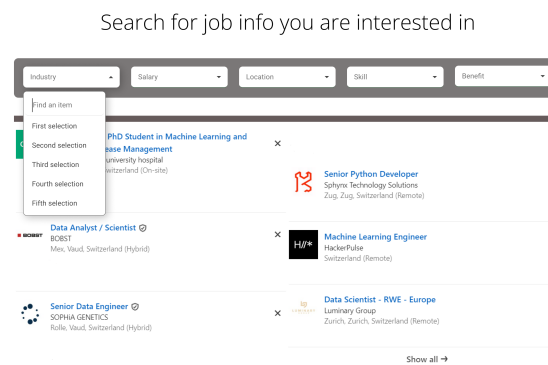
1.1 Basic Overview of Dataset



There are 3 visualization cards displaying an overview of the dataset, each card represents some basic visualizations of descriptive analysis for postings, companies, and jobs: For example:

- **Posting:** A pie chart showing the distribution of LinkedIn job postings by expected experience level. Users can interact with this pie chart by hovering over the segments to get more details such as the exact number or percentage of job postings in each category.
- **Company:** A bubble chart representing the top 10 companies by size across industries. Moving the cursor over a bubble enables users to see a tooltip with more detailed information, such as exact company size, country, and number of employees.
- **Job:** A pie chart showing the distribution of job benefit types. When users click each segment, the job postings offering that benefit would appear, giving them a quick and clear understanding of the benefits landscape.

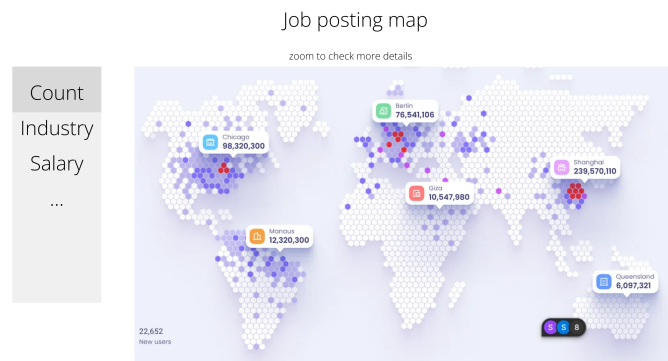
1.2 Searchable Job Posting Table



A Searchable Job Posting Table allowing users to access the table with job postings that match the filters applied. Columns include the job title, company name, location, salary range, and a brief description. Users can click on a job title to get more details, sort the table by any of the column headings, and use a search bar to refine the results within the filtered subset further.

1.3 Interactive Job Postings Map

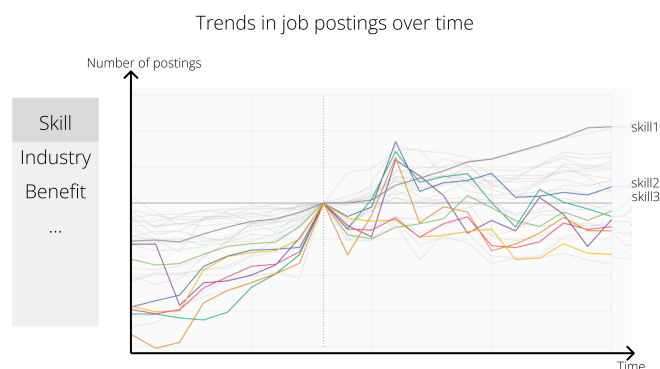
An interactive map that users can zoom in on a particular region on the map to explore more information on jobs or companies in this area. Users can choose different aspects they are interested in on the left panel to refine the data displayed



on the map. For example, the 'Quantity' field will show the geographical distribution of the number of companies in the map, while clicking 'Industry' would update the map to show the location distribution of various industries. Several interactions are as follows:

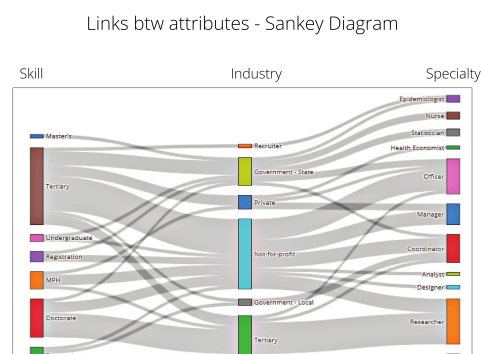
- **Zooming in** a certain area for more details on additional information about job postings.
- **Hovering over** a hexagon can display a tooltip with more detailed information, such as the exact number of job postings, the most popular industries, or the average salary range for that location.
- **Clicking on** a hexagon will drill down to a more detailed view of job postings in that area or open a sidebar with a list of available jobs, companies posting jobs, and other statistics.

1.4 Trends in Job Postings over Time



A line chart showcasing the trend in job postings over time, such as the fluctuations in demand for various skills or industries, the rise in remote job opportunities... Users can choose one certain panel to check its changing trend. When hovering over a line, this line would be highlighted and some related information will be shown beside.

1.5 How Different Skills Relate to Various Industries and Specialties



A Sankey diagram to illustrate how different skills relate to various industries and specialties. The width of the bands connecting these categories represents the volume from one category to another. For example, a wide band flowing from skill "Analyst" to industry "Information Technology & Services" and then converging on specialty "Consulting" suggests that a significant number of people with analyst skill are employed in this industry as consulting. Users could hover over the flows to see additional information, such as the percentage of each of different skills required for a particular industry, what skills are required of employees in a particular position and their corresponding proportions. There also could be interactive filters that allow users to refine the diagram by skill level, industry sector, or specialty.

2 TOOLS

- **d3.js**: A JavaScript library for creating dynamic, interactive charts and data visualizations.
- **Figma**: A platform to design the prototype of a website.
- **Bootstrap**: A front-end framework for rapid, responsive development of web pages.
- **leaflet**: A JavaScript library for creating interactive maps.
- **jQuery**: A JavaScript library to improve development efficiency and code maintainability.
- **Python**: Data processing for further data visualization.

3 ADDITIONAL IDEAS

- **Real-time Data Visualization**: Incorporate updates to the visualization as new job postings are added to LinkedIn, allowing users to see trends and changes in real-time. This will help in tracking the dynamics of job markets across different industries and locations as they evolve.