# Your Best Country to Retire in Europe*
## An Information Visualization project

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### Abstract

Retirement occupies an important place in everyone's life plan. Living in another country after retirement is becoming more attractive than ever. Our work aims to develop a visual application to help users choose the most suitable country for them among 31 European countries. We develop a multiview interface with Flask based web service, and add interactivity to it. After the users input their personal preferences on five indicators, our system can calculate the corresponding recommendation results and rankings, and visually present them on the web for easy comparison.

**Keywords:** Information visualization, Geospatial analysis, Retirement, Europe

## 1 Introduction

Visualization tools have a long history of being used to present data. In prehistoric times, people used the tally marks and basic symbols to record the number of livestock and grain. Later, the Indians and Arabs invented and developed Hindu–Arabic numeral system, which became the cornerstone of modern mathematics. With the increasing complexity of information processing requirements, different visualization tools have been developed and applied to different fields, such as tables and charts used in economic activities and map analysis used in epidemiology. The emergence of these visualization tools has greatly promoted people's understanding of data and the nature behind it. Information visualization has gradually developed into a discipline. However, in most periods of history, the visualization of information has always appeared in the form of static tables and graphs, dealing with small-scale data. Those static tools are unable to cope with the increasing volume and dimension of data.

Until recent decades, with the development of computer computing power, visualization technology with interactive functions makes it possible to visualize complex and high-dimensional data. The era of big data puts forward higher requirements for information processing. Without the help of visualization tools, people can hardly extract the knowledge they want from massive amounts of data.

When people talk about retirement, many factors need to be considered : financial, social, age and so on. Although most people will live in their home country when they retire, retiring abroad is becoming more and more attractive with the increasing degree of globalization. They may be attracted by the low cost of living, the warm and sunny climate, or the exotic cultural atmosphere. Especially for Europeans, the convenience of visas makes it easier to live across borders. However, when the idea of retiring abroad comes to mind, most people have no idea which country is best for them. Many research institutions, such as Forbes [8], have built sophisticated systems of indicators to rank the best countries to retire [5]. But we hope to recommend countries that are truly suitable for users in a more intuitive, customized, and interactive way.

## 2 Research Question

We chose 27 EU countries and four additional countries – Norway, Switzerland, Iceland and the United Kingdom, a total of 31 countries, as the scope of our research. Our choice is mainly based on two factors: First, the socio-economic data of these countries are publicly available, and are based on consistent standards; Second, it is of more practical significance for our research to limit the scope to Europe. The visa and economic convenience between these countries allows people to live in other countries outside their home country after retirement.

Our research is generally based on the following two assumptions: **1)** Each user has a unique preference for his or her ideal retirement country. For example, some users pay more attention to the living environment, while others are more concerned about the cost; **2)** Each country has its own strengths and weaknesses in different fields. For example, Switzerland, as a country with beautiful environment, has the disadvantage of extreme high cost of living. Based on the above two assumptions, we hope to allow users to input their own preferences, and then our system returns customized recommendation results based on each user's preferences and presents them in a visual manner. Therefore, we can split our research topic into three sub-questions.

### 2.1 Q1: Establish a quantitative evaluation system

People have different preferences for choosing the ideal retirement country, so an objective evaluation system is needed to quantify this preference. We abstract the evaluation system into five indicators:

1. Environment and Health Care
2. Cost of Living
3. Degree of Internationalization
4. Population Quality
5. Safety

Environment and health care, which measures a country's performance in the natural environment, sustainable development and medical treatment; The cost of living index is used to evaluate the price level and asset prices. For ordinary people with limited budget, the lower the cost of living, the better; The degree of internationalization mainly refers to the English level and the foreign immigrant population. The higher the English level, the higher the proportion of foreign-born residence in the total population, the more convenient life for foreigners in this country. The population quality covers the level of education attainment and the gap between the rich and the poor. The higher the level of education attainment, the smaller the gap between the rich and the poor, indicating the higher the quality of population. With the frequent occurrence of terrorist attacks in Europe in recent years, social security has gradually attracted people's attention. Therefore, we hope to introduce such considerations into the model.

*Github repository: https://github.com/DanferWang/InfoVis_team06

Then we assign each country a standardized score between 0 and 100 on each indicator. How we acquire and process these scores will be described in detail later. What we need to do is to match users with the most suitable pension country for them based on their input and the performance of each country on each indicator.

### 2.2 Q2: Visualize the results

Next, we need to select the appropriate components to build our interface and represent the results. Displaying a map is an intuitive way to visualize geospatial data. It is wise to use the Choropleth map of Europe in our interface. The scores earned by each country are represented by the hue of the color, which can help people compare their candidate countries. In addition, we need modules that can display rankings more intuitively, such as bar charts sorted by recommendation scores. Based on the above requirements, we need to design a multi-view including map, bar chart, and input interface as our main interface.

### 2.3 Q3: Add interactivity to the interface

Interaction design can be divided into two parts. First, we should determine how the front-end receives input from the user and sends the input parameters to the back-end. Second, we can add interactivity to the visualization results returned from the server. For the first part, users are allowed to control the input through sliders, which is more intuitive than entering numbers directly. Different indicator sliders have different colors for easy distinction. In order to enhance the interactive experience, the entire interactive process should have low latency, and the user can obtain real-time feedback during the operation. We also want to add interaction between the map and other modules, such as the ranking displayed by bar chart. Good interaction design can convey more information more effectively and facilitate the learning process.

## 3 Related Work

### 3.1 Geospatial Data Visualization

Geospatial data visualization(Geo visualization) is one of the earliest forms of information visualization. It is used to depicted spatial features, and with the incorporation of data reveal additional attributes and information, which make readers better understand the data.

Geo Visualization focuses on the relationship between data and its location to create insight. Any positional data works for spatial visualizations and analysis, which highlight the physical connection between data. It overlays variables on a map using latitude and longitude to foster insight [6]. Maps are the primary focus of the Geo Visualization. They range from depicting a street, town, or subdivisions to showing the boundaries of a country, continent, or the whole planet. They act as a container for extra data. For this aspect, it allows us to create context using shapes and colors to change the visual emphasis. They help identify problems, track change, understand trends, and perform forecasting related to specific places and times [17].

The main features of a map are defined by the scale, projection, and symbols [6].

- **Scale** defines the proportion between distances and sizes on a map and their actual distances and size on Earth.
- **Projection** is the process of taking a globe and visualizing it on a two-dimensional picture.
- **Symbols** are used to donate different types of information on a Geo Visualization.

There have been many types of Geo Visualizations. The following contains some common types [14].

- Proportional symbol maps: Show quantitative data for individual coordinates using size.
- Choropoleth maps: Fill maps for showing ratio and rate data in defined areas.
- Heat maps(Density maps): Highlights trends by showing the frequency of occurrences.
- Flow maps: Connect paths across a map to highlight changes over time.
- Topographic maps: Show the elevation of features on a map through contours.
- Isopleth(Isoline): Show a range of quantitative data overlaid on a map.
- Cartogram: Distort one aspect of a map to accentuate the key data.

In today's world, geospatial data is key, and most business, applications, and services revolve around the location element. Therefore, deriving faster insights from geospatial data visualization is important. A visual summary of information makes it is easier to identify patterns and trends to gain insights. Geo Visualization has made inroads in a diverse set of real-world situations calling for the decision-making and knowledge creation processes it can provide [13]. Decision makers use Geo Visualization as a tool for modelling the environmental interests and policy concerns of the general public, such as environmental studies and urban planning.

### 3.2 Multiview Visualization

The term multiview is a compound of multiple views, which is the general name used to describe any instance where data is represented in multiple windows. It usually implies that different representations are placed in subsequent windows and that operations on the views are coordinated [16]. Multiview helps complex data to be explored easily by dividing the cognitive load. Creating multiple, easy to understand views with different aspects of the data instead of one cluttered view with a lot of variables is more effective [4].

A multiview visualization, or a multiple view visualization, uses two or more distinct views to support the investigation of a single conceptual entity [18]. Combining different visualization techniques and applying them on data acquired during one observation, belonging to the same concept, can yield deeper insights into the data, make finding causal relationships easier, and uncover unforeseen connections.

Some applications make use of multiview visualization in terms of abstract data with 2D representations. The common point of all these systems that they provide an exploration environment in which brushing and linking is highly used [7]. We apply multiview visualization approach for our exploratory visualization in order to make users' work easier.

### 3.3 Retirement on Country

Demographic changes and population aging represent a challenge that each country needs to face around the world. There is a strong need to adapt to continuously changing life conditions and environments in different fields, such as health care system, the security of society, and quality of air. Moreover, it is essential to understand the beliefs, values, needs, and goals of the specific group of people in order to provide a suitable environment that meets their needs and requirement in the visualization [2].

The Global Retirement Index(GRI) is created by Natixis Investment Managers and CoreData Research to examine the factors that drive retirement security and to provide a comparison tool for best practice in retirement policy. In 2020, a mean score was calculated for each category-housing, benefits & discounts, visas & residence, cost of living, fitting in & entertainment, healthcare, development, climate, governance, and opportunity, which is known as *Natixia*

Table 1: Variables included in ERI

| Category | Variable |
| --- | --- |
| Health | • life expectancy at age 65<br>• healthy life years at 65<br>• share of people with good or very good perceived health at age 65 or over<br>• total health care expenditure (€ per inhabitant)<br>• medical technology (magnetic resonance imaging units per 100,000 inhabitants) |
| Finance | • people at risk of poverty or social exclusion in age class 55 years or over<br>• mean equivalised net income in Euro (age class 65 years or over)<br>• median equivalised net income in Euro (age class 65 years or over)<br>• inability to face unexpected financial expenses (type of household: one adult 65 years or over)<br>• health workforce migration (number of medical doctors) |
| Labour | • gender pay gap in unadjusted form (from 55 to 64 years)<br>• employment rate (age group 55-64 years)<br>• part-time employment as percentage of the total employment (from 55 to 64 years)<br>• participation rate in education and training (from 55 to 64 years)<br>• inability to face unexpected financial expenses (type of household: two adults, at least one aged 65 years or over) |

*2019*. The European Retirement Index(ERI) consists of the 15 target-oriented indicators, grouped into three thematic sub-indices: health, finance, and labour market, in Table 1 [5].

### 3.4 Development Techniques

In order to develop an interactive visualization with maps and some statistical graphs, we utilize several libraries or frameworks, such as *Leaflet*, *D3.js*, and *Flask*.

*Leaflet* is the leading open-source JavaScript library for mobile-friendly interactive maps. It works efficiently across all major desktop and mobile platforms, can be extended with lots of plugins. We use a custom *Mapbox* style for nice grayscale tiles that look perfect as a background for the visualization.

*D3.js* is a JavaScript library for manipulating documents based on data. *D3* allows us to bind arbitrary data to a Document Object Model (DOM) combining powerful visualization components, and then apply data-driven transformations to the document, HTML.

*Flask* is a lightweight Web Server Gateway Interface(WSGI) web application framework. It is designed to make getting started quick and easy, with the ability to scale up to complex applications. It has become one of the most popular Python web application frameworks. We use *Flask* as a backend to run the application and an interface between the calculation and presentation over the interaction with data.

## 4 Data and Model

### 4.1 Data

Our research focuses more on the visual presentation of data, and the model should be as simple and intuitive as possible. For the sake of convenience, objectivity and comparability, we choose the indexes issued by authoritative organizations when constructing the indicator system.

Table 2: Indicator building

| Indicator | Index |
| --- | --- |
| Environment and Health Care | • Environmental Performance Index of 2020<br>• Euro Health Consumer Index of 2018 |
| Cost of Living | • Cost of Living Index of 2021 |
| Degree of Internationalization | • EF English Proficiency Index of 2020<br>• Non-national population by group of citizenship, 2019 |
| Population Quality | • Tertiary Education Attainment Level<br>• GINI coefficient |
| Safety | • World's Safest Countries of 2019 |

**Environmental Performance Index (EPI)** [19] is a quantitative assessment index of ecological environment and sustainable development based on the national scale. It is jointly developed by Yale University and Columbia University. This index uses 32 parameters across 11 categories and ranks a total of 180 countries in 2020. EPI is widely used in environmental quality assessment and policy formulation, so it is a very suitable construction index for our research.

**Euro Health Consumer Index (EHCI)** [15] is a comparison of European health care systems based on waiting times, results, and generosity, which aims to measure the "consumer friendliness" of healthcare systems.

**Cost of Living Index** [1], published regularly by Numbeo.com, is based on consumer prices, local purchasing power and housing prices across 138 countries around the world. Numbeo.com is a collaborative online database founded in 2009. The index assumes that the cost of living in New York City is 100, which is a relatively high number. Most countries/regions have scores below 100, but a few countries, such as Switzerland, have scores above 100, so we must deal with them appropriately.

**EF English Proficiency Index(EF EPI)** [12] ranks 100 countries around the world according to the average English proficiency of their citizens. In the 2020 rankings, the Netherlands ranked first with 652 points. As the languages vary widely across the Europe, English proficiency is one of the most important indicators to measure the livability of a country for foreigners. This index also needs to be standardized.

**Non-national population by group of citizen-ship** [9]. The proportion of the migrant population can largely reflect the degree of openness of a country. Many countries in Europe have a high proportion of foreign populations, such as Switzerland and Luxembourg. Relatively speaking, such a country will provide more convenience for foreign residents. On the other hand, foreigners living in a country are usually more likely to become friends.

**Tertiary Education Attainment Level** [10] according to a report by Eurostat. There is no doubt that the quality of a country's population is highly correlated with the average educational level of the country. The quality of the population of the target country affects people's willingness to move to a new country to some extent, especially for those who have received higher education.

**GINI coefficient** [3] is a statistical dispersion based index designed to measure the level of income inequality in a country. This index ranges tetween 0 and 1, the lower the score, the more equal the income. We use this index to construct an indicator of population quality, because the income gap will affect the overall quality of population and people's happiness in life. Again, we need to standardize this index before using it.

**World's Safest Countries** [11] is published by Global Finance. The safety score for countries equally weighs each of the three factors: war and peace, personal security, and natural disaster risk.

### 4.2 Data Processing and Modeling

1. Standardized

The ranges of these indices are not the same, our weighted average model requires all five indicators to have the same range, such as 0 to 100. Otherwise the indicator built by indices with larger ranges of scores will have a greater weight. Therefore, we need to standardize the above indexes. The formula used is as follows:

$$Indicator = \frac{Index - Index_{min}}{Index_{max} - Index_{min}} \tag{1}$$

As mentioned above, in order to make the model as intuitive as possible, we used an equal-weight weighted average when combining multiple indexes into one indicator, and finally obtained the value of the indicator. The indicators we calculated were positively correlated with the final recommended score, the higher the better. But for some indices, such as the Gini coefficient and the cost-of-living index, lower is better. We use 100 minus the standardized index as the final index to construct the indicator, so that the consistency of the index and the index can be guaranteed.

2. Weighted and Integrated

After the standardization, we assign each country a standardized score between 0 and 100 on each indicator.The complete scoring table has been included in the appendix. The only thing users have to do is to assign weights to each of the five indicators according to their personal preferences. Then our model will calculate a weighted average score based on the weights received by the front-end. In this process, only the weights are changed, and the score of each country on each indicator will not change with user input. Finally, the system would rank countries based on the weighted average score and visualize the results on our interface. The formula for calculating the weighted average score is as follows:

$$\begin{gathered} FinalScore_{country} = \sum_{i=1}^{5} w_i Indicator_i \\ i = 1,2,3,4,5 \\ w_i \in [0,100] \\ \sum(w_i) = 1 \end{gathered} \tag{2}$$

## 5 Features

In this section, we would showcase what elements we use and why they are suitable for visualizing our results. That is, the features in our visualization would be illustrated in details and be further discussed. Our visualization could be divided by four parts:

- Slider
- Donut chart
- Map
- Bar chart

Each part is connected with each other so that the users are be able to easily figure out or learn something using the elements in our visualization. We would elaborate on the reason why we use such elements to tell the story, and the usage how user can utilize each element in our visualization.

### 5.1 Slider

*What each slider stands for:* We provide five sliders in the left-bottom part of our web page. Each slider represents an indicator weight controller, which means the value of each slider represents the weight of each indicator. The slider could be slid by the users so that the weight of such indicator will be changed in real time. The higher the slider value is, the more users are care about.

*How the sliders interact with other elements:* First, the donut chart is linked to slider, which means every value of slider would be transformed and be shown in the donut-chart way. Second, for the rest parts of our visualization, our works take each weight of indicator(each value of slider) as input, and pass them to the back end. The back end would do a simple computation according to the condition of weighted indicator with the corresponding data we have already collected and preprocessed. Afterwards, the result score would be produced and passed to the front end. Therefore, the map and the bar chart parts would show the result scores immediately. We would illustrate both map and the bar chart in details in the corresponding following sections.

*The reason why we chose slider:* The main reason why the slider is utilized in our work is that it offers us a way to show the continuous change of results smoothly. That is, whenever the user changes the value of slider, the rest parts of visualization shows the results right away. This kind of procedure can hardly be accomplished by other input type, such as text, number, button, spinner.

### 5.2 Donut chart

*What donut chart represents:* The donut chart is placed at the top-left part of our web page. It literally a different type of representation with the same value derived by all sliders. That is, the input values gathered from sliders are encoded using donut chart. To be more specific, we shows the percentage of each weight of indicator in the donut chart.

*How the donut chart interacts with sliders:* As we mentioned above, the donut chart is an encoded representation of sliders' values. Therefore, it would change and show the percentage of each indicator's weight whenever the user slides the sliders. For instance, we have five indicator's weight: w1, w2, w3, w4, and w5; the portion of w1 in donut chart shows:

$$w_j^* = \frac{w_j}{\sum_{i=1}^{5} w_i}$$

Moreover, in order to make users recognize each portion in donut chart easier, the color of the portion in donut chart are the same as the one in slider. The effect is shown in the Figure 1. For instance, the color of slider of Environment Performance Index is green so we also arrange the same color(green) in donut chart representing the Environment Performance Index.

*The reason why we use donut chart:* Slider part only shows the value and the position on each indicator. However, the weight value of all indicators would be summarize and be transformed to percentage. The better way to show the percentage would be the donut chart. That is why we use this chart to make user better perceive the change on the percentage of each indicator.

### 5.3 Map

*What the map shows:* The map is placed in the middle of our web page. It is a choropleth map which shows the score of each country using color-hue gradient. The deeper the color is, the higher score the country get. Moreover, the map would be changed by sliding the slider in real time so that the users could observe the variation continuously on the map.

*How the map interacts with other elements:* As we mentioned above, the map is changed whenever the user slides the slider. Moreover, some elements and effects are added in the map in order to make user easier perceive the trend or learn the knowledge from it. First, the legend is placed at the left-bottom of the map which shows the interval of scores corresponding to the colors. Second, a small window is flow at the right-top part of the map. Whenever the user hover the mouse over a country, the window would show the score that such country get from our computation and data; and the country would be highlighted in the meantime. All the interaction functions mentioned above are presented in Figure 2.

*The reason why we use map:* We aim to provide a visualization make user find their best country to retire in Europe. However, it may be difficult to be familiar with all the countries' geolocation in Europe. Therefore, we put the map in this visualization rather than only showing the score and the ranking of each country.

### 5.4 Bar chart

*What the bar chart shows:* We place the bar chart at the left part of our web page. It illustrates the result score of each country; and is arranged in sorted way. That is, it also shows the ranking of all countries by the result scores they get. Moreover, the color of each bar is corresponded to the one in the choropleth map, which make user easier recognize them.

*How the bar chart interacts with other elements:* The bar chart would also be changed by sliding the slider in real time, so that the user could observe the variation continuously. That is, whenever the slider changes, the bar chart would sort and color right away. Furthermore, we add some elements and effects in this part. First, when the user hover the mouse over the bar, it would highlight the bar and popup a small window showing the rank, the country name and the score. In the meantime, the map would also highlight the country which is corresponded to the bar the user hover over. Therefore, the bar chart could be also interactive with the choropleth map; and it presents at the Figure 3.

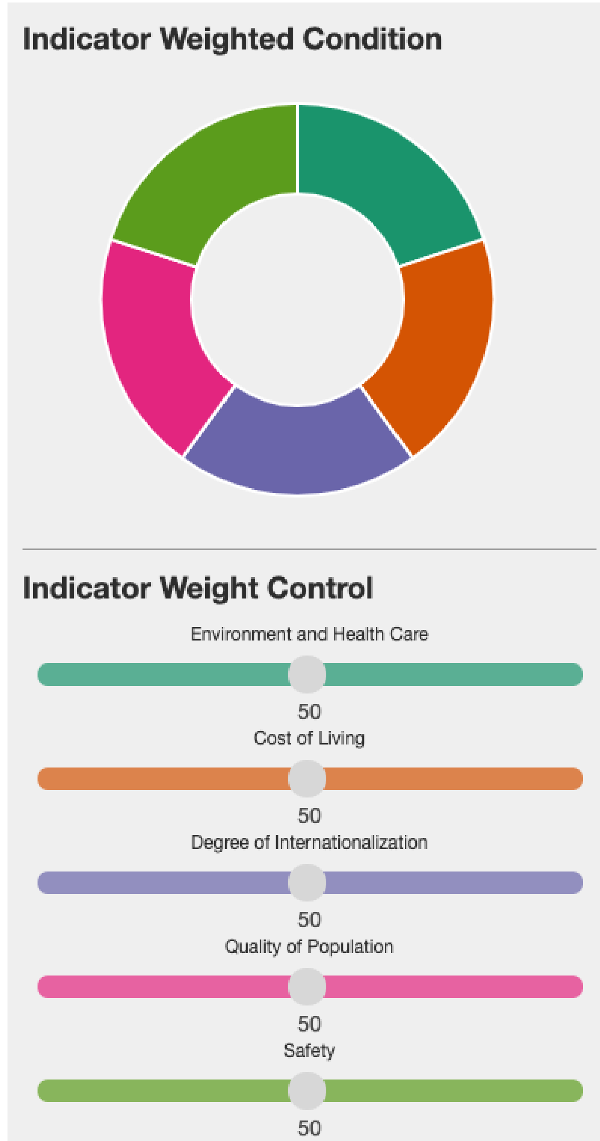


Figure 1: Slider and Donut chart

*The reason why we use bar chart:* The result scores are represented by bars rather than by monotonous numbers array. It not only makes the visualization more varied but also makes the user better compare the difference between the score of countries. That is the reason why the bar chart is suitable in our visualization.

## 6 Result

### 6.1 Overview

Figure 7 shows the overview of our project. We arrange the title of the project in the top of the page to illustrate what the system can help users do. In the left area of this page, users can slide the sliders to change the weights of five indicators, the donut plot will show the partial of every component in real time. The map is placed in the middle of the page. The color in the map shows the different level of score of every country based on the indicators. You can use the legend in the bottom-left to interpret the color of a country. When you hover over a country, the corresponding score and country's name will present on the top-right corner; and the country in the map will be highlighted. The last area is a bar plot which shows the result

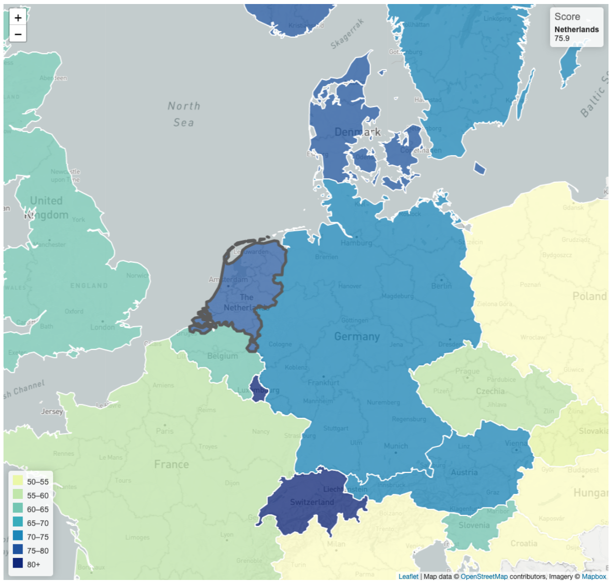


Figure 2: Choropleth Map and its Elements

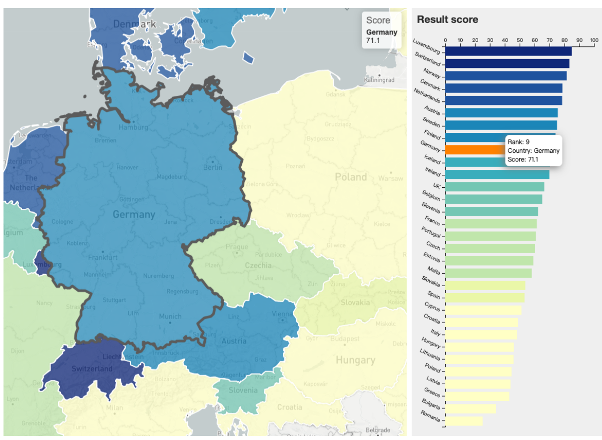


Figure 3: Interaction between Choropleth Map and Bar chart

scores of all countries on the right. Also the interaction between the map and the bar plot is added in our work. When you hover on a rectangle in the bar plot, the corresponding country in the map would be highlighted, and the selected rectangle will be highlighted with filling an attractive color. In the meantime, the ranking, score, and the name of the country also popup next to the rectangle. These are how our visualization work; and how the elements interactive with each other.

## 6.2 Case Analysis

Here we take three cases as examples to show the results obtained from our information visualization system.

**Case 1**: If people take environment more seriously but do not care about living cost, they may choose Switzerland, Norway or Denmark as ideal country to enjoy their retirement. Figure 4 shows the top 10 ideal countries for this case. We can see that they are mainly Nordic countries or western European countries.

**Case 2**: If people cannot afford an expensive life but they want to live in a country with good environment, they could choose some eastern or southern European countries, such as Slovenia, Portugal, Malta or Czech. These countries have lower price levels comparing

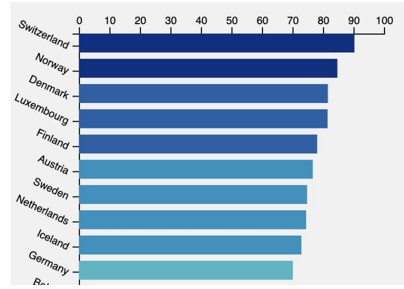


Figure 4: Top 10 Ideal Countries for Case 1

with western European countries. However, the difference of scores is not significant, so users may need to consider their extra indicators to make a final decision. Figure 5 shows the top 10 ideal countries for this case.

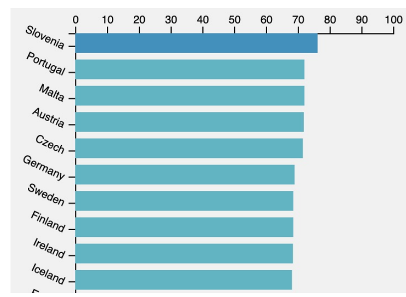


Figure 5: Top 10 Ideal Countries for Case 2

**Case 3**: If people want to live in a safe country, the ideal choice might be some Nordic countries, such as Iceland, Finland or Norway. Figure 6 shows the top 10 ideal countries for this case.

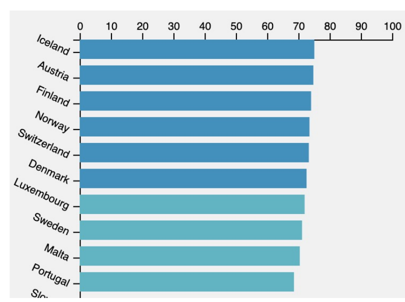


Figure 6: Top 10 Ideal Countries for Case 3

## 6.3 Conclusions

As can be seen from the cases discussed above, when different input weights, the recommended country and the rankings will vary greatly, which is also in line with our initial assumption that no country is perfect and suitable for everyone. We have taken the user experience into consideration when setting the color, which has both contrast and consistency. In some cases, the top-ranked countries have very similar scores and colors, which requires users to adjust the indicators to further filter the results. For new users, it's easy to figure out the relationship between the modules.The front end and back end are very interactive, with real-time feedback for all actions: as the user drags the input slider, the results on the right side change immediately. This helps users better understand the impact of the indicators they are currently adjusting on the results. There are many

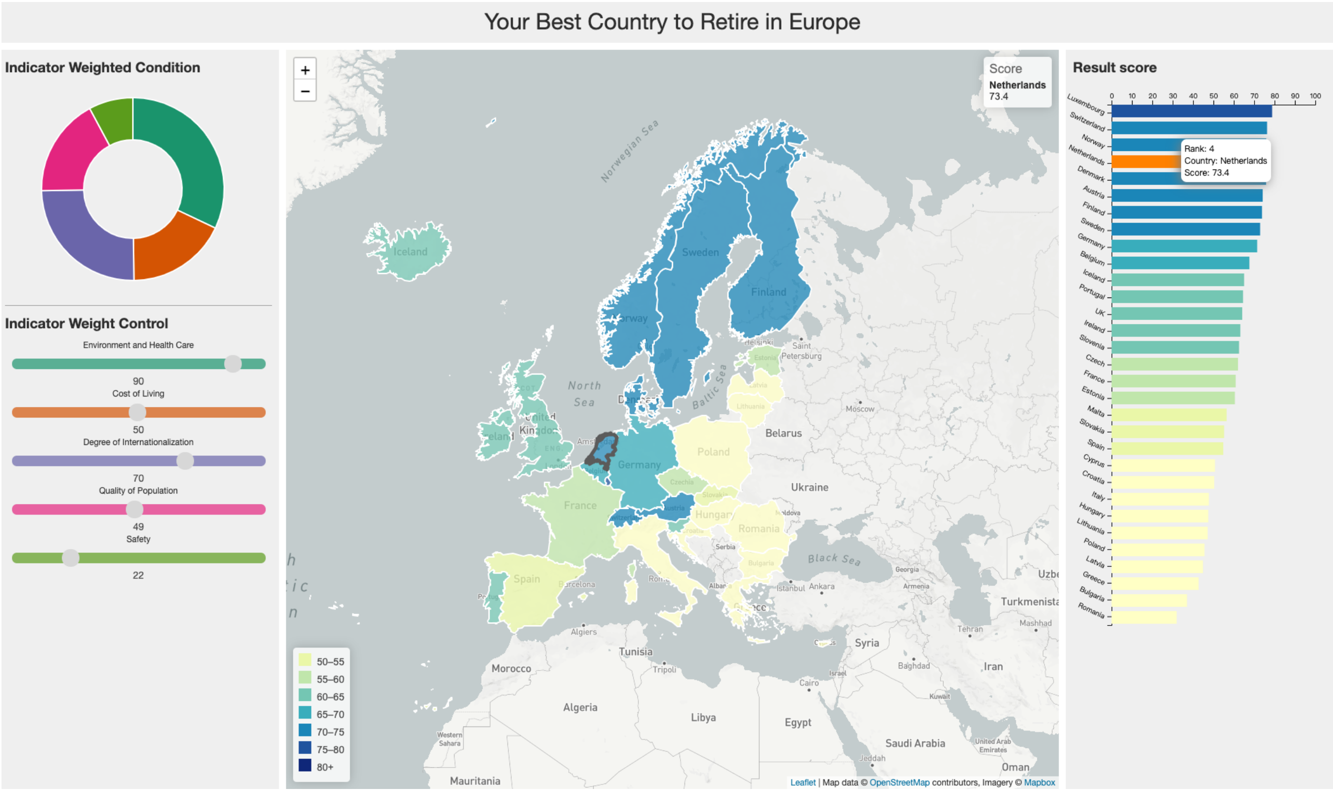


Figure 7: Overview

dynamic effects in the operation process. For details, please refer to the attached demo.

## 7 Further Work

From the results discussed above, our research answers the research questions we put forward quite successfully, and provides a preliminary system framework, on which more functions can be further developed. However, due to the limitation of time and programming skills, we have only realized some basic functions, and there are still many problems to be solved. In the future, we can focus on the following aspects:

In terms of user interaction, we let users enter their personal preferences and recommend tailored results for them based on their inputs. However, the current input is based on the user's subjective preferences, without considering external restrictive factors, such as the user's economic status, age, language ability, etc. Therefore, the countries we recommend may not meet the real needs of users. In the future, more complex multi-parameter models and filtering mechanisms should be built to recommend only countries that match the user's real situation. In other words, users should be recommended only those countries that they can afford. In addition, we hope that the recommendation system can meet some unique requirements of the user. For example, we can add a filter to the results to allow the user to filter the results by climate conditions or certain language.

In terms of improving interaction design, we can add action history. We can store the historical value settings of each indicator. In addition, users can directly compare the results on the map, donut chart, and bar chart by clicking on the backup history session, so that users can better understand the impact before and after the change.

The retirement index (that is, the recommended score in the project) can be improved by importing more parameter indicators and considering more scientific models. Inspired by the two famous indicators GRI and ERI mentioned in 3.3, the indicators for evaluating retirement should be updated with time and human development. People's material and spiritual requirements for retirement may change over time. Therefore, the internal parameters in the model need to be modified or adjusted for the progress of human society and provide predicted values. If given the opportunity, we should consider inviting human users to use our system, not only to test the accuracy of our predictions, but also to evaluate the entire visualization project.

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## 8 Appendix

Table 3: Scoring Table

| Country | EU | Eurozone | EEA | Schengen | EPI | COL | International | Population | EHCI |
|---|---|---|---|---|---|---|---|---|---|
| Austria | 1 | 1 | 1 | 1 | 73.42 | 60.33 | 72.09 | 77.55 | 75.68 |
| Belgium | 1 | 1 | 1 | 1 | 85.53 | 57.08 | 62.66 | 46.29 | 53.34 |
| Bulgaria | 1 | 0 | 1 | 0 | 19.51 | 97.4 | 0 | 60.78 | 21.33 |
| Croatia | 1 | 0 | 1 | 0 | 25.89 | 80.85 | 60.43 | 42.26 | 46.15 |
| Cyprus | 1 | 1 | 1 | 0 | 23.86 | 72.6 | 73.57 | 44.59 | 31.01 |
| Czech | 1 | 0 | 1 | 1 | 52.19 | 88.55 | 43.16 | 68.88 | 60.79 |
| Denmark | 1 | 0 | 1 | 1 | 89.75 | 42.98 | 65.85 | 87.28 | 67.49 |
| Estonia | 1 | 1 | 1 | 1 | 50.06 | 80.75 | 52.96 | 60.65 | 55.58 |
| Finland | 1 | 1 | 1 | 1 | 84.31 | 58.22 | 60.29 | 74.88 | 76.67 |
| France | 1 | 1 | 1 | 1 | 72.7 | 54.83 | 46.98 | 68.96 | 27.79 |
| Germany | 1 | 1 | 1 | 1 | 68.87 | 65.55 | 66.93 | 84.26 | 50.62 |
| Greece | 1 | 1 | 1 | 1 | 19.51 | 75.91 | 51.56 | 49.87 | 0 |
| Hungary | 1 | 0 | 1 | 1 | 14.16 | 95.44 | 49.37 | 52.45 | 37.71 |
| Iceland | 0 | 0 | 1 | 1 | 50.84 | 37.51 | 66.82 | 89.12 | 98.51 |
| Ireland | 1 | 1 | 1 | 0 | 35.5 | 52.16 | 78.61 | 94.03 | 57.32 |
| Italy | 1 | 1 | 1 | 1 | 39.99 | 62.88 | 40.61 | 59.57 | 22.33 |
| Latvia | 1 | 1 | 1 | 1 | 14.66 | 84.59 | 47.37 | 49.06 | 41.68 |
| Lithuania | 1 | 1 | 1 | 1 | 19.73 | 90.18 | 41.33 | 56.11 | 40.69 |
| Luxembourg | 1 | 1 | 1 | 1 | 76.94 | 36.62 | 100 | 90.35 | 55.33 |
| Malta | 1 | 1 | 1 | 1 | 24.39 | 62.35 | 71.44 | 57.93 | 100 |
| Netherlands | 1 | 1 | 1 | 1 | 85.51 | 56.95 | 73.6 | 85.98 | 32.50 |
| Norway | 0 | 0 | 1 | 1 | 88.97 | 27.52 | 68.43 | 100 | 70.96 |
| Poland | 1 | 0 | 1 | 1 | 8.92 | 96.2 | 45.2 | 55.84 | 39.45 |
| Portugal | 1 | 1 | 1 | 1 | 57.46 | 84.58 | 59.39 | 46.78 | 75.93 |
| Romania | 1 | 0 | 1 | 0 | 0 | 100 | 42.67 | 0 | 31.01 |
| Slovakia | 1 | 1 | 1 | 1 | 48.95 | 77.61 | 41.68 | 59.55 | 39.70 |
| Slovenia | 1 | 1 | 1 | 1 | 37.78 | 88.65 | 61.58 | 69.05 | 66.74 |
| Spain | 1 | 1 | 1 | 1 | 43.96 | 77.92 | 41.28 | 58.89 | 57.56 |
| Sweden | 1 | 0 | 1 | 1 | 73.45 | 56.39 | 71.82 | 79.81 | 65.26 |
| Swizerland | 0 | 0 | 1 | 1 | 100 | 0 | 76.13 | 95.75 | 77.41 |
| UK | 0 | 0 | 0 | 0 | 54.21 | 65.12 | 75.39 | 71.61 | 22.82 |