

Data Visualisation 2: Ski Europe

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<https://github.com/thedevLEGEND27/data-viz-2.github.io>

Domain, Why & Who:

The domain that I want to explore is Ski Tourism. I plan on going holiday in Europe so this data and visualisation is intended to help those in a similar boat to make informative decisions.

The dataset that powered the insights is from Ski-resort-stats.com (Ski Resort Stats) and the data of the weather is from Wikipedia (Wikipedia). The geographical data which the ski data was projected onto comes from Natural Earth (Natural Earth).

What:

From the perspective of a ski tourist, I want to capture excitement by first delving into the peaks and which countries may interest them. I found a dataset on Kaggle.com which pulled stats from Ski Resort Stats from the year 2022 Feb. This data then had to be cleaned and matched to with the geographical dataset. All this was done in Vega Lite. The weather dataset I got from Wikipedia had to be data wrangled with cleaning, pivoting for it to be usable. I ended up writing two python scripts which prepared the data for Vega lite.



The Highest Peaks in Europe

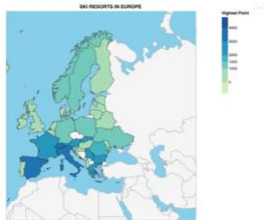


Figure 1: Highest Skiing Points in Europe

If you're seeking the ultimate skiing adventure in Europe, explore the continent's highest peaks. Spain has the highest peaks, starting at 3300 meters elevation, and Dufourspitze in Switzerland, reaching 3827 meters, are some destinations for high-altitude skiing. With breathtaking landscapes, pristine snow, and world-class resorts, these peaks offer a thrilling experience for skiing enthusiasts seeking an unforgettable alpine adventure.

When is the best time for a ski holiday? 2022

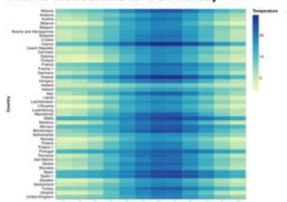


Figure 2: Heatmap of 2022's European Weather

The best time to go skiing in Europe largely depends on the specific region you plan to visit and your skiing preferences. Here's a general guideline for some of the popular skiing destinations in Europe:

Our Favourites:

The Alps (France, Switzerland, Italy, Austria):

December to early April. If you're looking for the best combination of snow and fewer crowds, consider going in January or early February.

Scandinavia (Norway, Sweden, Finland):

November into April. You'll find unique experiences like skiing under the Northern Lights in the northern regions.

Ski Accommodation: Where to Hit the Slopes in Style

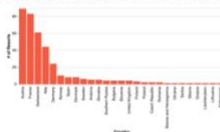


Figure 3: Skiing Resorts

If you want to be spoiled for options then Austria, France & Switzerland have you covered. Austria boasts renowned ski resorts, including **Zell am See**, **Kitzbühel**, and **Saatch-Hochgölsen**. These destinations offer superb skiing, top-notch facilities, and a delightful après-ski atmosphere that's hard to resist.

Base Camp to Summit: How high can you go?

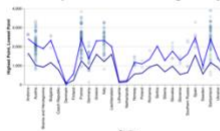


Figure 4: Highest & Lowest Skiing Points in Europe

Depending on your experience the height of peaks you're willing to undertake change. If you're looking to stretch yourself look no further than France. If it's your first time then Lithuania and Norway are highly recommended.

Total Slopes By Level

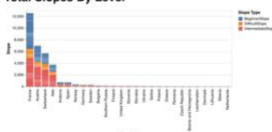


Figure 5: Slopes By Level Europe

Ski slopes are tailored to all skill levels. Beginners embrace gentle, forgiving slopes, intermediates navigate a mix of terrain, and experts navigate steep, challenging descents with tight turns. Whether you're just starting or a seasoned pro, there's a slope for every level of skiing expertise.

The countries with the most total slope also feature the most number of resorts to stay at, making you spoilt for choice whatever level you are at.

The Price Tag For A Day Of Fun Feb 2022

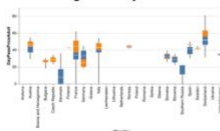


Figure 6: Daily Adult Price Averages

Skiing in Europe is an exhilarating adventure that doesn't have to break the bank. On average, a day on the slopes costs about \$80, making it an accessible winter sport for many. Scandinavia, Denmark, not typically associated with skiing, offers the most budget-friendly experience. This charming Scandinavian country boasts some smaller ski areas, and its affordability makes it an excellent destination.

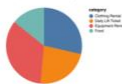


Figure 7: Estimated Average Daily Cost

If you're from a country that doesn't have snow or you can't bring equipment, then renting out gear may very well be a great choice. You can expect to spend around \$200 a day for all your skiing needs.

Figure 1: Ski Data Visualization, Tej Sidhu

Why and How:

My visualization contained 7 idioms. Going top to bottom I will explain my choices for them.

1. Figure 1
 - a. This is a choropleth map with colour saturation used to show the peak heights. Because the data is geographical/nominal in nature and the values are quantitative this is a very quick way for the user to visualise the data.
2. Figure 2
 - a. I used a heatmap because you can see trends on a high-level vs seeing values. This reduces the cognitive load. I did this in Vega by making my data temporal and mapping it to the x-axis.
3. Figure 3
 - a. A simple bar graph for a simple statistic. I aggregated the number of resorts by country and presented them in this format.
4. Figure 4
 - a. I used a multi-line plot to highlight the variance in peaks by country so users can decipher a region interesting to them based on their skill level. This also has interactivity like the other charts with a tooltip to easily access the values.
5. Figure 5
 - a. An aggregated bar graph to present a break down on slope by level. This is the best way to represent categorical and quantitative data through area.
6. Figure 6
 - a. A box and whisker plot is the best way to educate users about what the range of price they can expect to pay - the most and least. I did this using the min-max box plot.
7. Figure 7
 - a. Breakdown of the daily expenses is best suited to a pie chart so you can see which items will make up most of the cost and then you can make an informative decision about where you can save.

Design:

Layout

The visualisation takes the format of a magazine style of storytelling. The goal is to be informative and therefore it takes them down in a sequential order. This carries a linear progression. This is predominantly done with the header 1 titles.

Colour

I kept the colours simple as the magnitude and discrete nature of the data is harder to convey with colour alone. Because of the winter theme in this visualisation, I used colder colours such as blue, green when relating to peaks. Later using orange, red, blue for other categorical data.

Primary colours red and green was avoided for colour blindness except in the packed bubbles where colour was not a mark.

Figure Ground

The visual hierarchy is built through the size of the elements and the linear scrolling progression. The design is very cantered and balances the white space delicately, not appearing too empty or distracting from the visualisations.

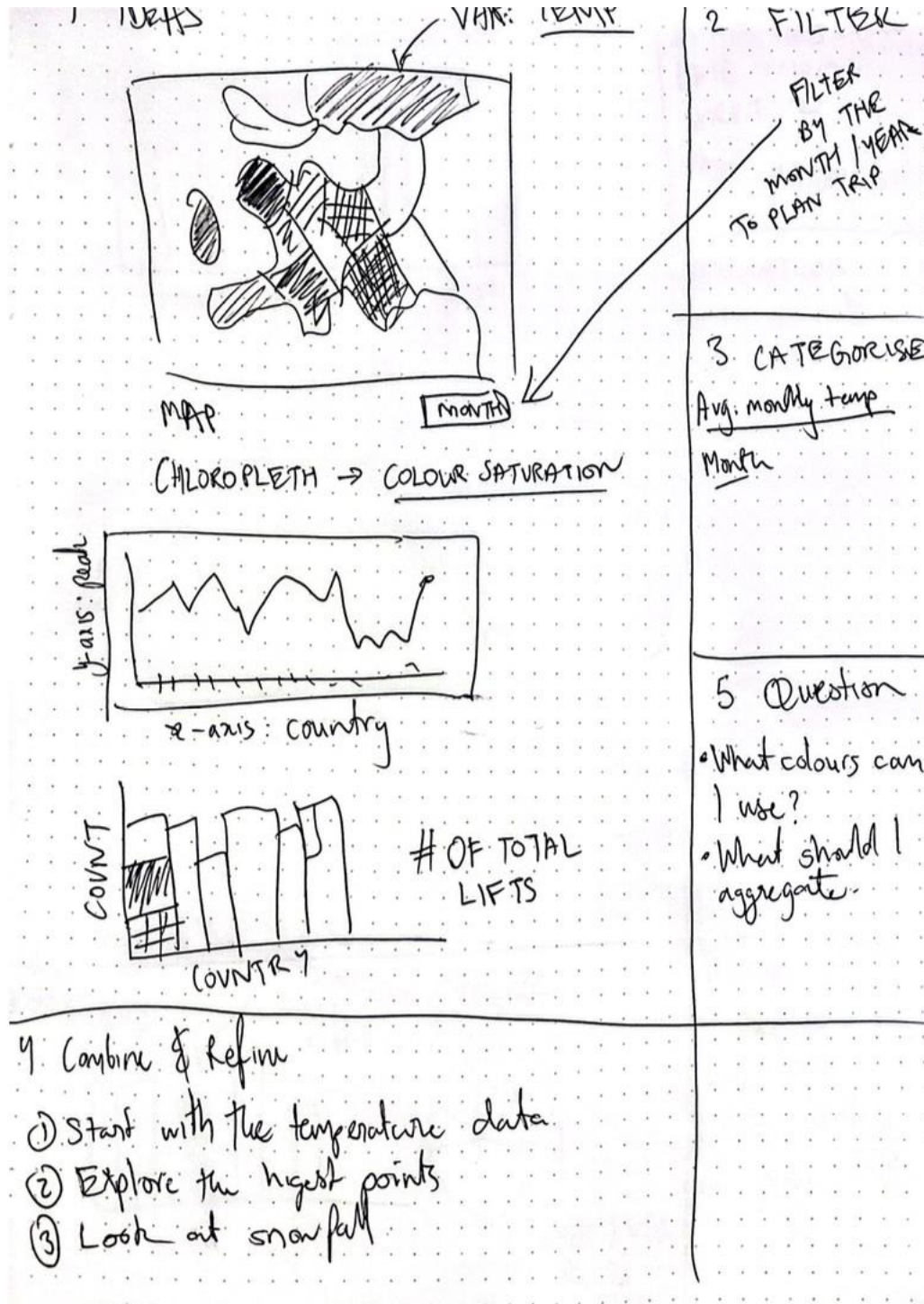
Typography

Arguably, one of the key factors influencing the visualization's coherence is the choice of Helvetica, a globally recognized symbol of simplicity. Employing bold weights in the titles aligns with Gestalt's principle of connection, effectively grouping related elements and guiding the viewer's visual flow.

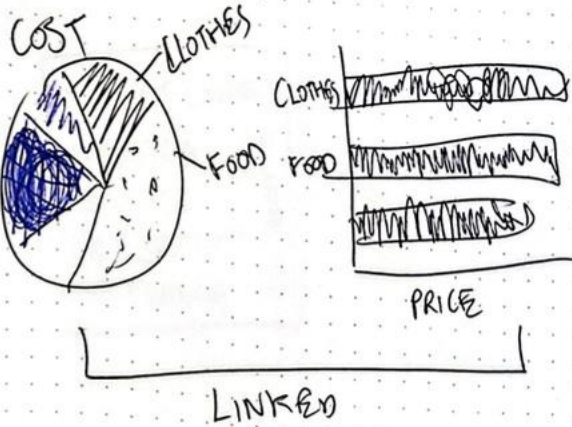
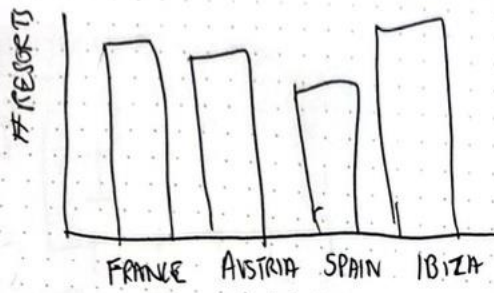
Storytelling

I used catchy titles to tell a story from first building the users excitement about the heights of ski resorts to then guiding them to make a choice about where and when they see themselves potentially going based on weather and resort data.

5 DESIGN SHEETS



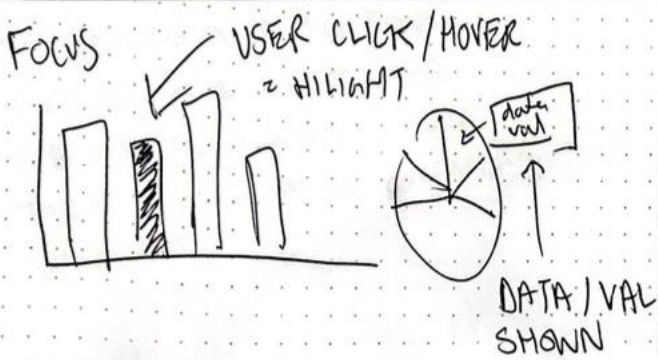
LINKED



TITLE HOLIDAYING
AUTHOR TES SIONU
DATE 1/10/23
SHEET 2
TASK: HOLIDAY SKI

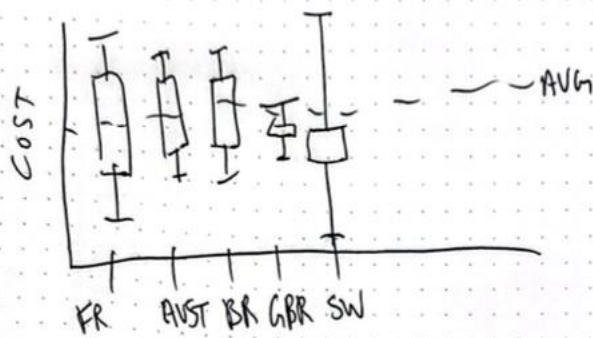
OPERATIONS

- Allow user to Filter data by country
- Hover over the data point to get a tooltip
- Highlight data with a click



DISCUSSION
Missing other key columns.
Not the most important categories.

LAYOUT



SELECT COUNTRY

☐ AUSTRIA
☐ SWITZ
☐ GERMANY
☐ FRANCE

TITLE: COST

AUTHOR: TES

DATE: 1/2/23

SHEET: 3

TASK: COST

OPERATIONS

FILTER & SELECT COUNTRY

DRAW RULER TO SELECT RANGE

FILTER OUT COUNTRIES

Focus

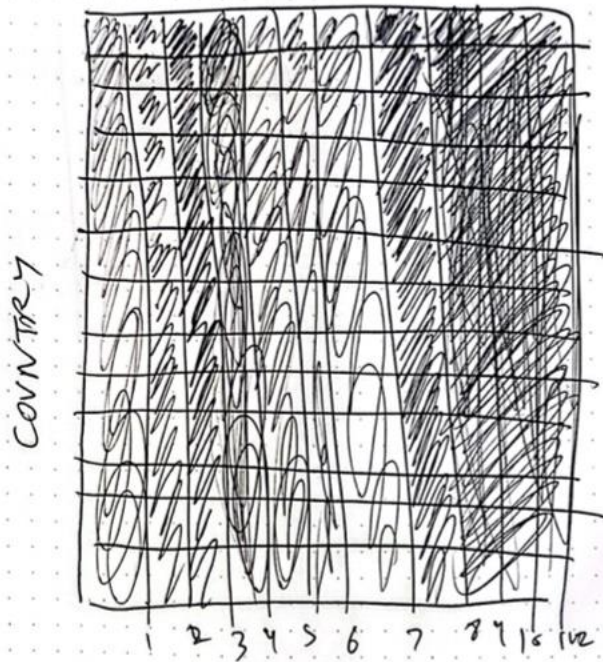
THE RULER IS A BIG FOCUS BECAUSE IT IS WHERE THE EYE NATURALLY GOES TO AND THEN SERVES AS A COMPARISON OPERATOR.

DISCUSSION

⊕ THERE IS INTERACTIVITY FEATURED

⊖ NEED MORE VISUALISATIONS

LAYOUT



#COUNTRY

HEATMAP OF WEATHER

TITLE : WEATHER
AUTHOR : TEJ

DATE : 1/2/23

SHEET : 4

TASK : WEATHER

OPERATION

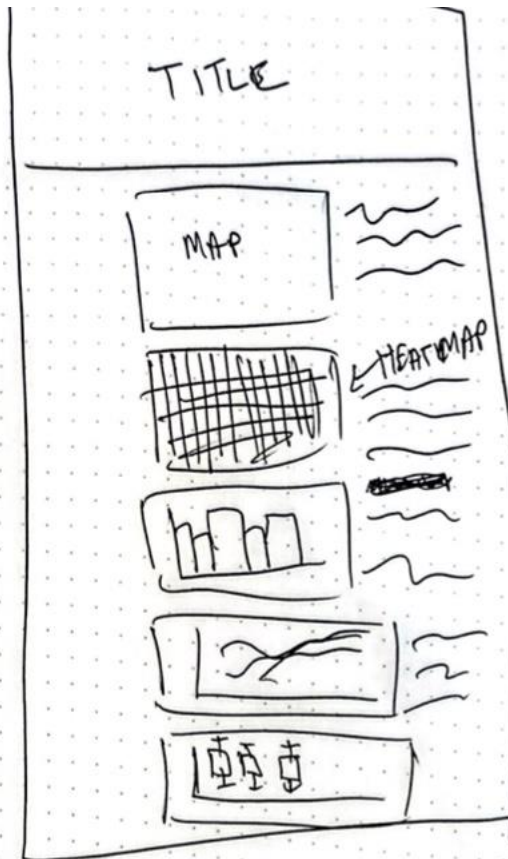
FILTER | HIGHLIGHT
ROWS

FOCUS

THE COLOUR SATURATION GRADIENT
IS THE MAIN FOCUS OF THE
GRAPH

DISCUSSION

- (+) EASILY IDENTIFY
PATTERN
- (+) COMPLEX IDIOM



TITLE: FINAL
AUTHORITIES

DATE: 1/2/23

SHEET: 5

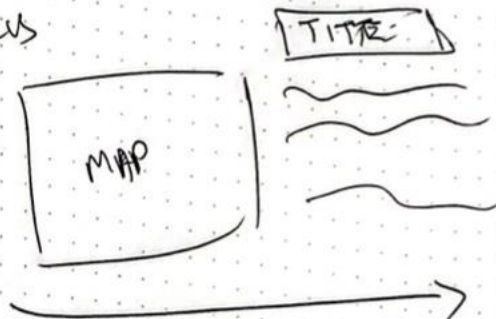
TASK: FINAL

OPERATIONS

EACH SECTION
HAS SPECIFIC
FILTER/ACTION

ALL HAVE TOOLTIP
LINEAR SCROLL
LAYOUT

Focus



USER GOES LEFT → RIGHT
TOP → BOTTOM.

DISCUSSION

① Good flow
storytelling
element
variety in
visualisations

② Can be ~~was~~
boring the layout

Bibliography

Datasets

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