Data Visualisation Project Documentation

Goal = make picture for insights for practical outcomes.

Data from stakeholders interacting with hub24 applications -> use data to create visualisation for insights to assist in product development and meeting user needs (where resources should be allocated -> better for users).

Taking advantage of public data + internal data -> for well-rounded insights.

Use 3D visualisations + any other creative ways that make it easier to view the patterns etc.

**Plan:**

Create a data visualisation tool with SQL Lite.

Some main data points for benchmarks: (start with just performance benchmark ie a singular metric)

* Tax return history
* Property information
* Census data -> individual details
* Additional income
* Age

^ most of these aren’t even on the given data…

***Given:***

1. Census data -> info on individuals -> could map their locations on a map, or summarise onto some graph…
2. Performance of asset (ROI) -> have this as a BENCHMARK parameter for the visualisation tool. Based on ACCOUNT ID selected…
3. Asset value -> map asset values (total) on the map for the specific visualisation feature. -> maybe some other geographical representations?

* Any useful visualisations? -> explain why it would be useful, what does it help us see better? What insights does it provide?

***Public:***

1. Government census data -> household income levels / distribution -> we can see the general average and see how much disposable income could be used for financial advising… (wealth management), ie where are the areas of opportunity…
2. Financial literacy results -> shows us what percentage of Australians would do better with a financial advisor… graph generically / geographically?

Tasks:

1. Display data in SOME way (experiment) -> **generic visualisation**
2. Create benchmark feature for performance (ROI) for each investor and advisor. -> **extra feature**
3. Have additional geographical visualisation feature -> some simple showcase on the map (some tool can do probably). -> **specifically asked for visualisation**

**Tangible steps:**

1. Work on 1 feature at a time…
2. Familiarise with SQL Lite module…
3. Convert csv into database
4. Download public data to be used

First make specific tools that do specific outputs -> then combine them all together in an application, that has an interface where you can access what visualisation you want to see.

Marketing demographic which age range should you market too… based on their disposable income?

To use to the tool, it needs to be connected to a data base, so then when the data base is updated the tool stays the same but is connected to the data base…

So first have the tool working, which arbitrary data sets given… Then in the grand scheme of things, you need to make a web application with javascript… that has its backend controlled python… somehow they sync together…

1. Store data… to be used

3 datasets now can be used and formatted specifically…

Each dataset has a distinct visualisation… done by some functions on the python… once the tools work…

We try to connect front end with back end…

Fear mongering for advisor clients -> some way to help visualise what the future of certain individuals faces to help educate!!!

So, visualisations for education purposes, help give information to clients and ultimately try to help in sales…

What would clients fear? A worse future?

* Money in account over time
* Spending habits

Web application -> contains the 3 main visualisations!!! For 3 different purposes…

1. Create layout
2. Have 3 main graphs in there
3. Can use dummy data, but data can be asked for … from Evan

Marketing bubble chart -> scatter plot with different sizes

1. how is the data formatted and accessed
2. how can we link the button to that… itll be like specifier buttons

so many visualisations can be made… can make one first, then just append the rest one by one… over time…

Geograph -> different countries and their financial literacy, or how much money they be making.

Then Evans data -> track ROI… that one section for benchmarking, won’t really need a visualisation just need to output the result as certain thing… and obviously use that data as just a line chart or something… s

Dates, Advisors, Market price…

So overtime we can track the total asset value that is owned by each individual advisor and benchmark performance, ie which advisors are performing the best, ie getting the best returns overtime, or as a percentage since different advisors would be putting in different amounts of money. So it’s about the proportional returns that are made… that represent the growth of certain assets…

^^^ plotly can handle all the data flows (I think)

Hexabin plots -> for age vs income, which ages have the most income density?

Graphs purposes:

Bubble -> marketing target, who to run ads

High tax -> more marketing but different visualisation / education

Low tax -> marketing and educative usecase -> ie where not to live

3 sections of visualisations:

1. marketing and education -> bubble chart and what not
2. sales training and education on advisory benefits (some generic display of statistics)
3. advisor tracking functionality -> database management and display

bonus -> LLM API functionality included… ie chatbot can talk to it ask it to what it thinks / relationship between parameters -> may cost money, but even just getting a outline of where it could be would be good…