Strategy for the Challenge

Contact with an XP Analyst and Insights

I spoke with an investment analyst at XP, and he explained that every month they use macro market analysis to derive an investment allocation table by profile. This was the first objective. He stated that the tables are constructed based on the macro scenario, while also taking into account the previous month's table.

Example Table:

		CONSERVADORA	MODERADA	SOFISTICADA
RENDA FIXA BRASIL	Pós-fixado	70%	35%	15%
	Inflação	15%	20%	25%
	Prefixado	2,5%	10%	7,5%
MULTIMERCADOS		2,5%	14%	10%
RENDA VARIÁVEL BRASIL		-	5%	15%
FUNDOS LISTADOS		5%	7%	13%
ALTERNATIVOS		-	3%	7%
GLOBAL	Renda Fixa	5%	5%	2,5%
	Renda Variável	-	1%	5%
TOTAL		100%	100%	100%

Building the Table

To build the table, I took two initiatives:

1. **Quantitative Approach:**

   I collected all the index reports (IPCA, SELIC, Exchange Rate) from XP, correlated them with the delta of the tables (current month – previous month),

and built a machine learning model.

2. **Qualitative Approach (LLM):**

   I created a summary of the macro scenario and enabled the LLM to modify the new table generated based on the obtained information.

Suggestions for Clients

To then offer investment suggestions, a table was created to represent the client's current allocation, followed by determining how much money needs to be added or withdrawn from each asset type to match XP's recommendation.

For example:

- Sell 100 thousand in stocks

- Buy 20 thousand in fixed income

All of this is done according to the client's risk profile.

After that, specific sale recommendations were made based on the profile. For instance, to achieve a 100 thousand sale in stocks, sell the stocks of HapVida and Magalu.

Portfolio Performance

Data from March and April 2024 were used to measure the performance over the last 30 days (all data coming from the XP website), and forecasts were made according to the macro scenario.

Development

Rivet running on a host machine was used to access external functions. Some of these functions were:

- **pdf2markdown** (using `llama_parse`)

- **Calculating portfolio profitability**
  ...and others. In total, 10 external functions were developed.