

Intellectual system of formation of text descriptions on investment activities

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Topic

Intellectual system of formation of text descriptions
on investment activities

Goal

Develop an intellectual system for the formation of text descriptions of investment activities
with the ability to automate the writing of comments

Target audience

Investment agents and financial professionals

Analysis of existing systems



- Marcus Invest
- J.P. Morgan Wealth Management
- Morningstar
- Bloomberg Terminal
- Vanguard PAS

Conclusions

Comparison by criteria:

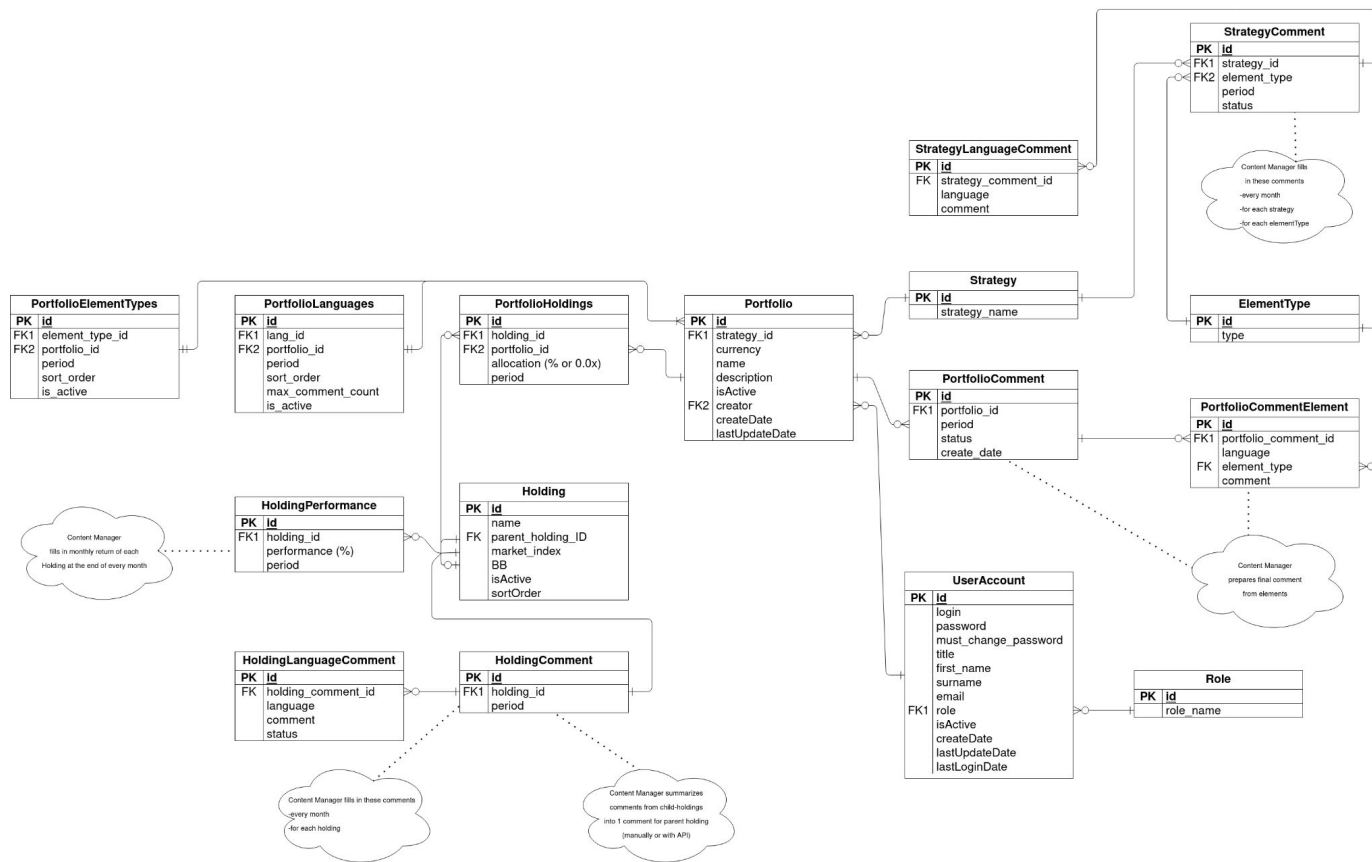
- Possibility to add new tools;
- Openness of the platform;
- Management considering types of holdings;
- Portfolio optimization;
- Delivery of reports.

Subject field

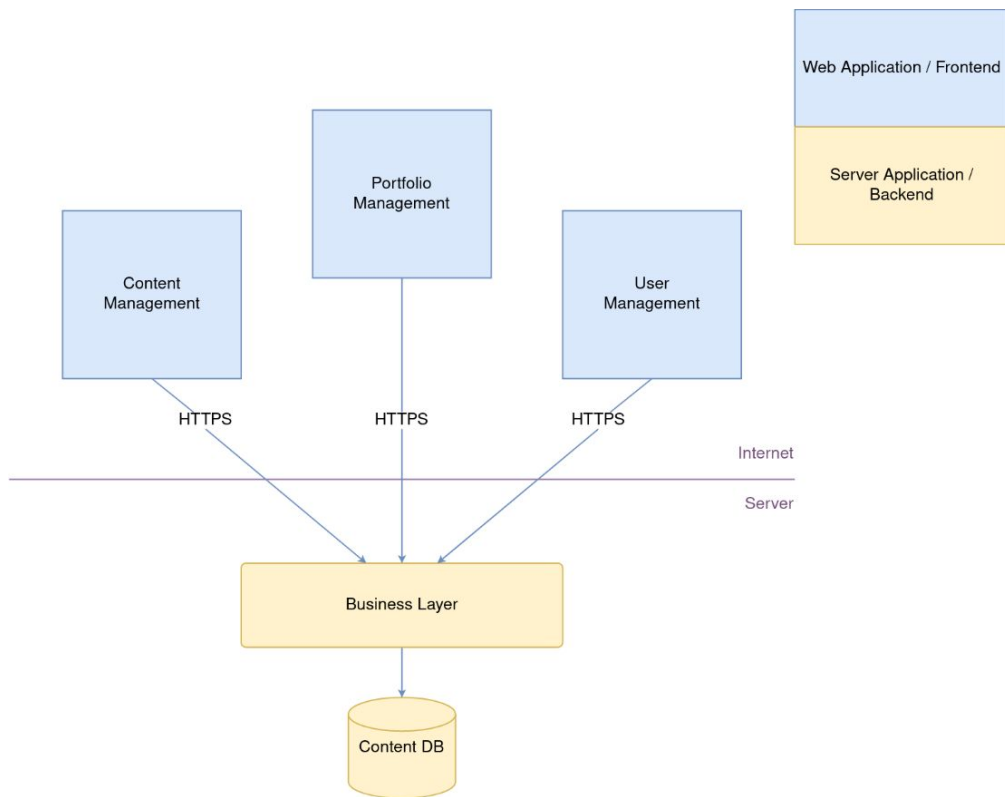
Key concepts:

- **Portfolio** - a set of investments owned by an individual or organization.
- **Holding** - a type of business entity that owns shares of other companies.
- **Strategy** - algorithm of actions on investment and withdrawal of funds.
- **Comment** - a document containing analysis and recommendations regarding investments.

Database



Implementation



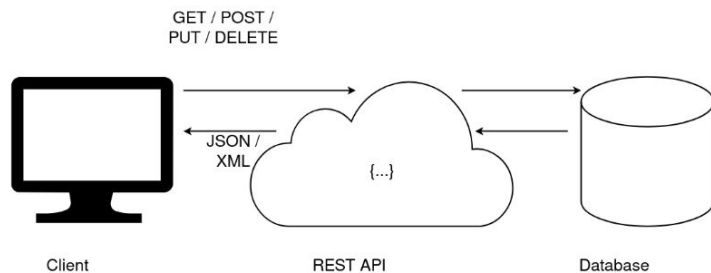
Client:

JavaScript, HTML.
(TypeScript, React и MobX)

Server:

Java, OpenAPI
(Spring Boot)

Services for text generation



API:
Python
(FastAPI, Transformers, OpenAI
API)

Comment generation

Paraphrasing:

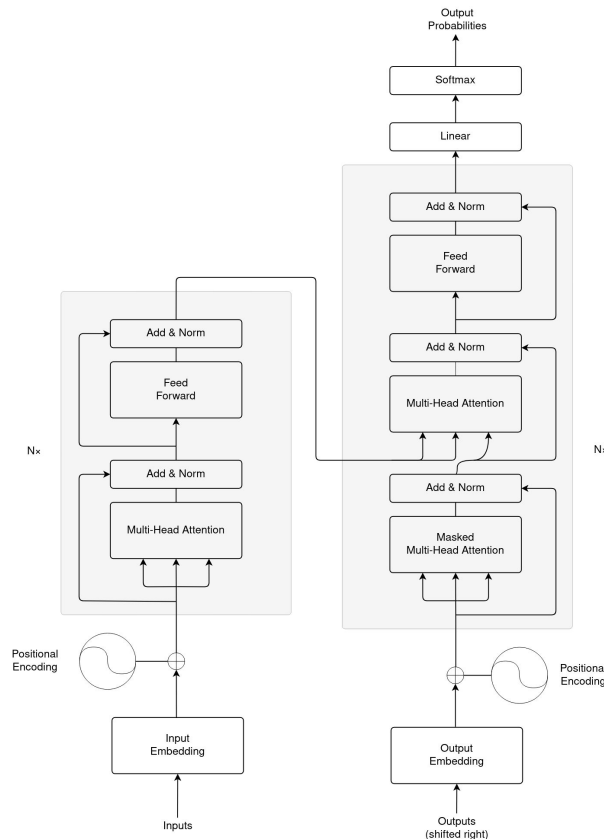
Replacement of words in the text with synonymous words.

(model To)

Abstract summary:

Phrases and sentences that emphasize key points of the original text are gathered together to create a clear and concise retelling.

(model GPT-3)



System demo














Financial App



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Holding Level Performance

filter by month search holding name

TY/YM	holding name	year chart	monthly	market index	BB	holding type
20101	NYSE:DAI		-10.30%	BB Barclays Basic Credit Franchise AA or A	LEGATRIU	AssetClass
20101	ETD:DAI		-13.26%	JP Morgan Asia South Index JACI JC	ROSTYRIU	AssetClass
20103	AM5:WNY		-8.03%	ICE BoE US Govt High Yield Constrained	LD00TRIU	AssetClass
21106	HKG:3690		-4.68%	MSCI Emerging Markets	I18785	AssetClass
22102	GOOG		-1.57%	BB Global Aggregate - Corporates	L300TRIU	AssetClass
22102	NASDAQ:FB		-2.54%	USIS Bloomberg CMCi Etc Agri Ex Livestock	HUCD	AssetClass
19101	NASDAQ:AAPL		-2.87%	Rogers Int Commodity Agricultural Index T	JACNGTRI	AssetClass
20111	HKG:6700			World Inflation Linked Securities Index	KCM0CMOP	AssetClass
21102	NYSE:VWR		2.56%	JP Morgan CEMBI Diversified Index USD	UCB6GRIU	AssetClass
21102	AM5:WNY		5.93%	ICE BoE US Govt High Yield Constrained	LD00TRIU	AssetClass
21102	JSE:NPN		2.23%	S&P 500 Index 10% Target Volatility	MW0D	AssetClass
22105	NYSE:ADVEN		-1.00%	Invesco Global Listed Private Equity ETF E	HHF0OF	AssetClass
20108	GOOG		-1.57%	USI Domestic Corporate High Yield ETC F	CAACALTR	AssetClass

5-TM/3

cancel

Parent Holding Communications

Holding

HGBUSD

summarise

translate

rewrite

We are neutral on USD duration and tactically over USD-denominated EM sovereign bonds against high. On the currency side we currently express a preference for GBP, JPY as well as a basket of EM currencies vs. developed market currencies.

Wir stehen der USD-Duration neutral gegenüber und haben eine taktische Übergewichtung von auf USD lautenden Staatsanleihen der Schwellenländer gegenüber Hochzinsanleihen. Auf der Währungssell bevorzugen wir derzeit USD, GBP, JPY sowie einen von Schwellenländerwährungen gegenüber den Währungen der Industrieländer.

concatenate

Portfolio Analysis

The screenshot shows the 'Return Contributors' section of the 'Return Analysis' tool. The main table lists various return contributors with columns for 'Return', 'Contribution', 'Rank', 'Weight', and 'Contribution'. The table is sorted by 'Return' in descending order. The 'Return' column is highlighted in blue. The 'Contribution' column is highlighted in green. The 'Rank' column is highlighted in yellow. The 'Weight' column is highlighted in orange. The 'Contribution' column is highlighted in green.

Below the table, there is a bar chart showing the contribution of each return contributor. The x-axis represents the 'Return' and the y-axis represents the 'Contribution'. The bars are colored according to the 'Contribution' column in the table.

At the bottom, there is a slider for the 'Return' value. The slider is set to 0.1000% and ranges from 0.0000% to 0.1000%.

Return	Contribution	Rank	Weight	Contribution
0.1000%	0.1000%	1	0.1000%	0.1000%
0.0999%	0.0999%	2	0.0999%	0.0999%
0.0998%	0.0998%	3	0.0998%	0.0998%
0.0997%	0.0997%	4	0.0997%	0.0997%
0.0996%	0.0996%	5	0.0996%	0.0996%
0.0995%	0.0995%	6	0.0995%	0.0995%
0.0994%	0.0994%	7	0.0994%	0.0994%
0.0993%	0.0993%	8	0.0993%	0.0993%
0.0992%	0.0992%	9	0.0992%	0.0992%
0.0991%	0.0991%	10	0.0991%	0.0991%
0.0990%	0.0990%	11	0.0990%	0.0990%
0.0989%	0.0989%	12	0.0989%	0.0989%
0.0988%	0.0988%	13	0.0988%	0.0988%
0.0987%	0.0987%	14	0.0987%	0.0987%
0.0986%	0.0986%	15	0.0986%	0.0986%
0.0985%	0.0985%	16	0.0985%	0.0985%
0.0984%	0.0984%	17	0.0984%	0.0984%
0.0983%	0.0983%	18	0.0983%	0.0983%
0.0982%	0.0982%	19	0.0982%	0.0982%
0.0981%	0.0981%	20	0.0981%	0.0981%
0.0980%	0.0980%	21	0.0980%	0.0980%
0.0979%	0.0979%	22	0.0979%	0.0979%
0.0978%	0.0978%	23	0.0978%	0.0978%
0.0977%	0.0977%	24	0.0977%	0.0977%
0.0976%	0.0976%	25	0.0976%	0.0976%
0.0975%	0.0975%	26	0.0975%	0.0975%
0.0974%	0.0974%	27	0.0974%	0.0974%
0.0973%	0.0973%	28	0.0973%	0.0973%
0.0972%	0.0972%	29	0.0972%	0.0972%
0.0971%	0.0971%	30	0.0971%	0.0971%
0.0970%	0.0970%	31	0.0970%	0.0970%
0.0969%	0.0969%	32	0.0969%	0.0969%
0.0968%	0.0968%	33	0.0968%	0.0968%
0.0967%	0.0967%	34	0.0967%	0.0967%
0.0966%	0.0966%	35	0.0966%	0.0966%
0.0965%	0.0965%	36	0.0965%	0.0965%
0.0964%	0.0964%	37	0.0964%	0.0964%
0.0963%	0.0963%	38	0.0963%	0.0963%
0.0962%	0.0962%	39	0.0962%	0.0962%
0.0961%	0.0961%	40	0.0961%	0.0961%
0.0960%	0.0960%	41	0.0960%	0.0960%
0.0959%	0.0959%	42	0.0959%	0.0959%
0.0958%	0.0958%	43	0.0958%	0.0958%
0.0957%	0.0957%	44	0.0957%	0.0957%
0.0956%	0.0956%	45	0.0956%	0.0956%
0.0955%	0.0955%	46	0.0955%	0.0955%
0.0954%	0.0954%	47	0.0954%	0.0954%
0.0953%	0.0953%	48	0.0953%	0.0953%
0.0952%	0.0952%	49	0.0952%	0.0952%
0.0951%	0.0951%	50	0.0951%	0.0951%
0.0950%	0.0950%	51	0.0950%	0.0950%
0.0949%	0.0949%	52	0.0949%	0.0949%
0.0948%	0.0948%	53	0.0948%	0.0948%
0.0947%	0.0947%	54	0.0947%	0.0947%
0.0946%	0.0946%	55	0.0946%	0.0946%
0.0945%	0.0945%	56	0.0945%	0.0945%
0.0944%	0.0944%	57	0.0944%	0.0944%
0.0943%	0.0943%	58	0.0943%	0.0943%
0.0942%	0.0942%	59	0.0942%	0.0942%
0.0941%	0.0941%	60		

Ways of development

1. Fine-tuning models with examples written by content managers;
2. Personalization of texts generated by models;
3. Automation of language model retraining on corrected texts.

Thanks for attention!

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