

Tailored Web Application for Optimal Portfolio Construction

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Overview

Background

AQUMON is a Hong Kong **digital wealth management** company that uses technology and algorithms to offer investment services to a wide range of investors.

One of the main services is constructing **ETF-based investment portfolios**

Existing Challenges

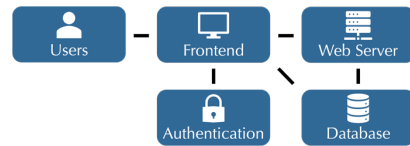
- Labor-intensive data preparation process
- Time-consuming portfolio construction
- Repetitive optimization process

Objectives

- Develop Database
- Automate portfolio construction
- Systematize project management

Implementation

System Architecture



Database Structure



Technology Involved



Frontend



Backend



Database &
Authentication

Administrator Mode

Add Security		Search Security	
Ticker	Name	Type	ISIN code
ADOT	ADT Growth and Innovation ETF	ETF	US0007267304
APUE	ActivePrivate U.S. Equity ETF	ETF	US8983462729
AVLV	Avantis U.S. Large Cap Value ETF	ETF	US0250723493
AVSC	Avantis U.S. Small Cap Equity ETF	ETF	US0250723328
B1000G	Bloomberg US 1000 Growth Index	Index	
BBLU	EA Bridgeway Blue Chip ETF	ETF	US0207267148
BESC	JPMorgan BetaBuilders U.S. Small Cap	ETF	US4664192803
BDO5	Bridges Capital Tactical ETF	ETF	US0207264749
BINFLS	Bloomberg Inflation Sensitive Equity In.	Index	
BRKEAZ	iShares Hong Kong Equity Index Fund	ETF	HK0000157542
BRIG	Bloomberg US Energy Select Index	Index	

Add/Update Security Data

Bulk Update

Search Securities

Display Security Detail

Basic security information

Historical price data



Change Log			
Date	Time	Action	Table Involved
2024-11-27	11:27:34	submit project portfolio for Project 1	projects
2024-11-22	12:00:40	save project comments for Project 8	projects
2024-11-20	11:02:54	update security profile for BBLU	securities
2024-11-20	18:29:38	submit project portfolio for Project 5	projects
2024-11-20	18:11:54	delete security profile for 1 securities: [WTGGRAWN]	securities

Change Log

Database change monitoring

Analyst Mode

Fund Selection

Investment objectives:
Targeted **geographical exposure**
Risk tolerance level

Filtering criteria:

Net assets

Inception Date

Geographical Exposure: ☒ Global ☐ United States ☐ Europe ☐ Asia Pacific

Risk Tolerance: ☐ Conservative ☐ Balanced ☒ Aggressive

1. Net Assets (million) : Larger than

2. Inception Date : Earlier than

Number of Securities : 7

Portfolio Optimization

Allocate assets by Python algorithms

Portfolio Customization

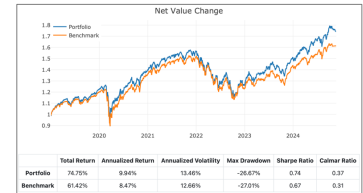
Add/remove constituent funds

Selected Securities		Other Securities	
Ticker	Proxy Index	Ticker	Proxy Index
GRCP	S&P 500 Index	PRAC	S&P 500 Index
XPRD	S&P 500 Information Technology Index	TRAD	Russell 2000 Index
TMFE	S&P 500 Index	MDCP	Russell Midcap Index
ETZ	STOXX Europe 600	BYRE	FTSE NAREIT All Equity REITs Index
EXSA	STOXX Europe 600	KVLE	KraneShares Value Line Dynamic Dividend Equity Index

Performance Analytics

Backtesting portfolio

Performance metrics



Manager Mode

Add/Modify Projects

Approve Portfolios

Provide Feedback

Current Projects		Past Projects	
Project 11	Urgent	Project 5	Completed
Project 7	2024-11-29	Project 4	Completed
Project 12	2024-12-17	Project 1	Completed
Project 13	Under Approval	Project 10	Completed
Project 19	2024-01-12	Project 8	Completed
Project 3	2024-01-18	Project 11	Completed
Project 23	2024-01-27		
Project 2	Pending Approval		
Project 6	2024-02-01		
Project 17	2024-02-21		

Composition			
Ticker	Name	ISIN Code	Weighting
BRKEAZ	iShares Hong Kong Equity Index Fund	HK0000157542	4.30%
ETZ	BNP Paribas Easy STOXX Europe 600 UCITS ETF	FR0011930193	4.09%
GRCP	Guru Farman Easy STOXX Europe 600 UCITS ETF	US0072373950	2.00%
TMFE	Mutual Fund Capital Efficiency 100 Index ETF	US34939W6434	12.61%
XPRD	First Trust Expanded Technology ETE	US32740L8514	2.00%
IK003RUS	Bloomberg Global Aggregate Index		75.00%

Display Portfolio Detail

Track Project Status

Urgent! Completed In Progress

Pending Approval Under Modification