



BYTE INTO STOCKS TODAY

COURSE NAME: SENG3011 COURSE CONVENER: BASEM SULEIMAN

TEAM NAME: SE3011-24-F14B-02 COURSE OFFERING: TERM 1, 2024

PROJECT NAME: CRESCENTBYTE - VIRTUAL TRADING PLATFORM

TUTOR NAME: MUHAMMAD RAHEEL RAZA

TEAM MEMBERS: PETER, FAREED, MAYNARDE, JAMES, MOHAMAD

How many of you currently
invest in the stock market?"



Meet Mohamed

>>>

Background:

- Mohamed is a 20-year-old university student studying Business.

Financial Awareness & Concerns:

- He is very intimidated by the complex financial jargon involved with investing and the financial risks he may accrue with his current level of knowledge.
- He is among the **68% of Gen Z Australians** who, according to **ASIC's Moneysmart program**, are highly concerned about their finances.

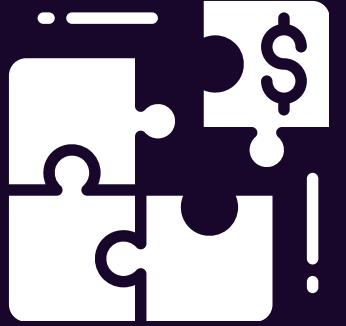
Needs:

- He needs a simplified, engaging way to learn about and start investing.



MOHAMED
AMARI

THE SOLUTION



Our Team

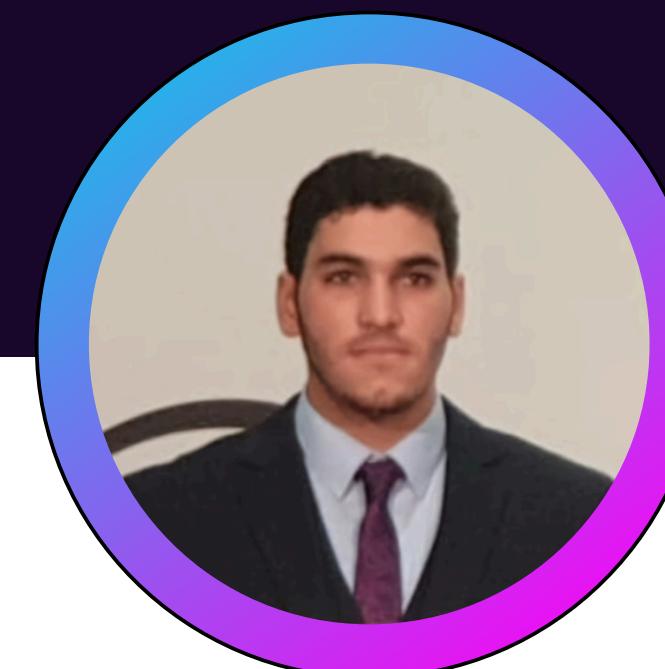
Five visionary minds with diverse expertise are unified on a singular mission—to demystify the complexities of finance for everyone. As pioneers in the fintech space, we are strategically positioned to capitalise on the market's expected growth, projected to surge by 18.2% in revenue by 2025.



Peter Louka
Team Lead



Fareed Farooqi
*Delivery
Manager*



Mohamed Mohamed
Product Owner



Maynarde Joseph
*Software
Engineer*



James He
*Software
Engineer*

WHAT IS CRESCENTBYTE?



Competitors



Trade

Popular

- Sell Buy Change%
- Gold AAPL, 1D O165.99 H166.68 L164.95 C165.47 -0.55 (-0.33%)
- EUR/USD 1.09420 1.09424 -0.00129 (-0.12%)
- AUD/USD 0.66979 0.66985 -0.00531 (-0.79%)
- WTI 80.73 80.78 -0.23 (-0.28%)
- USD/JPY 131.444 131.455 -0.266 (-0.20%)

Apple -0.55 -0.33% → Sell 165.47 Buy 165.78

1m 5m 15m 30m 1h 2h 4h D W M Indicators New

Dec Feb Mar Apr 1

Open(0) Pending(0) History

Account Summary

VOO VANGUARD S&P 500 ETF SHS 437.42 4.78 (1.10%)

Volume 4,153,854 Beta 0 Min Cap 276.756M Yield 1.05%

Account Value \$200,000.00 VWAP 437.42 Add to Watchlist Create Alert

Option Buying Power \$200,000.00 Avg Volume 5,386,648 IV 17.23% P/L 0 Dividend 1.5329

Stock Buying Power \$500,000.00 Ex Date 12/21/21

Forex Buying Power \$10,000.00

Cash \$200,000.00 P/L Day % 0% These are simulated values.

VOO Trades

All Positions Working

Watchlist

All Account Positions

Activity

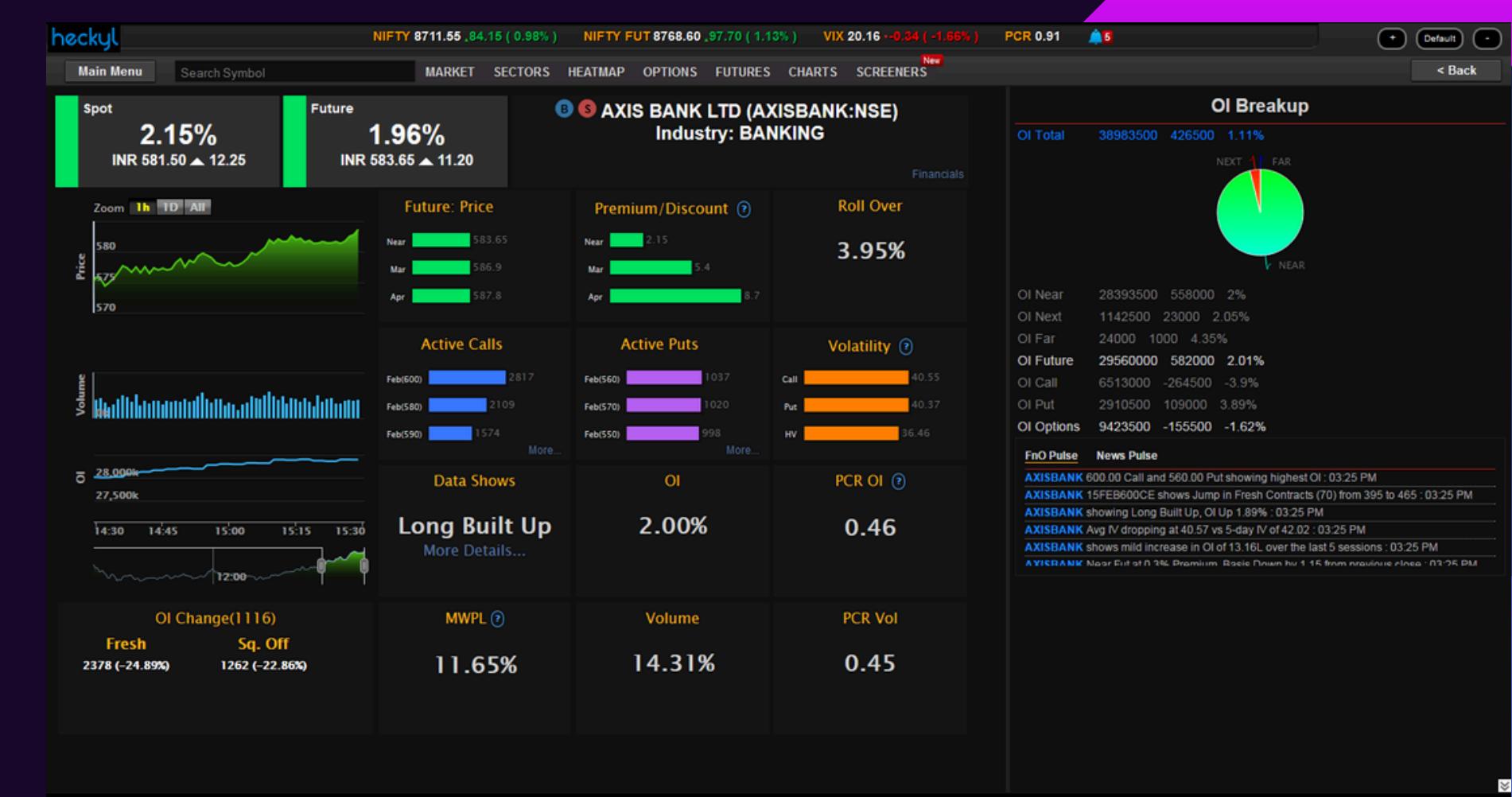
Positions

Position A Qty P/L Day \$ P/L Open \$

Cash Totals

Drag columns above to modify.

There are no symbols in this watchlist.



Regular Trader

Regular traders are market enthusiasts who prioritise real-time data analysis and comparative insights to make informed trading decisions quickly and efficiently.



Login



Dashboard



Analyse Stocks



Learn



Make Trade

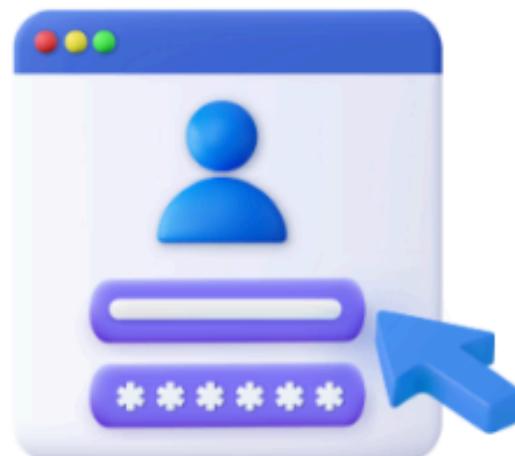


Compare Stocks



The Beginner

Learners are new to the stock market and seek a structured, educational pathway that guides them through fundamental concepts and practical applications with the aid of interactive tools and resources.



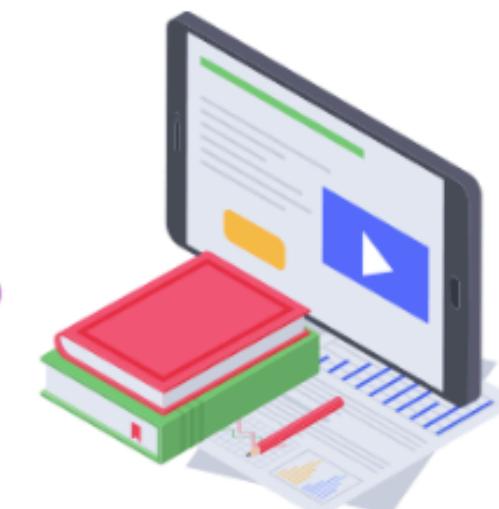
Login



Dashboard



Info Page



Learn

Quizzes

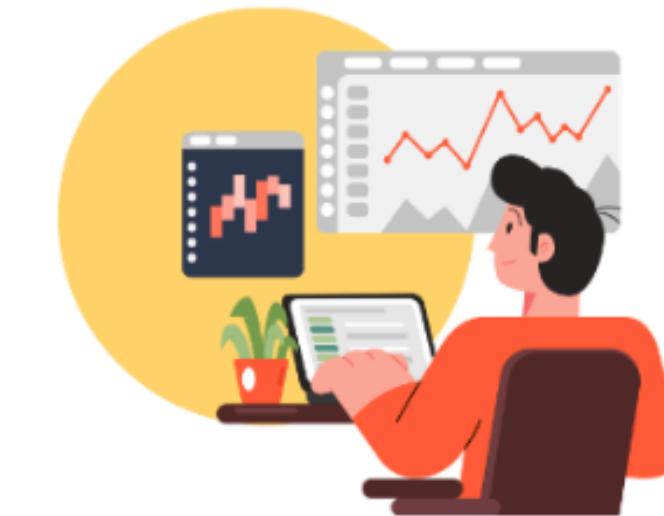
Guides

The Gamer

Gamers engage with the stock market through a gamified experience, where trading activities are intertwined with challenges, achievements, and levels to make learning and investing an enjoyable adventure.



Login



Trade & Gain XP



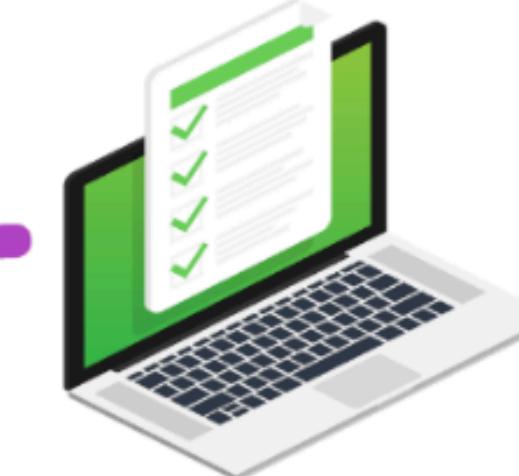
Milestones & XP



Learn



Level Up



Quizzes & XP



DEMO

[LINK HERE](#)

Swagger

<https://app.swaggerhub.com/apis/JAMJAMESHE1/CrescentByte/1.0.0#>





MOHAMED
AMARI



USER INPUT





Feedback survey

Are there any features you felt were missing or could be improved?

10 responses

I did not really find that it lacked any essential features that could be used, the graphics used on the graphs could be slightly improved but it is more of a subjective issue.

The range of stocks could be improved, I felt very limited with only a few options.

I would like to write a trading bot to get it to do the work for me.

A stockbook was missing, although having the current bid and ask is very good it doesn't compare to having a proper stockbook.

A way to share my achievements with friends

I think it would be helpful to place scheduled buy/sell orders

Tracking my portfolio was difficult

Maybe incorporate a process for when you first sign up, as theres quite a lot of features which mean nothing to me when I start, especially as someone who has very little stock knowledge.



Vitality Initiative Survey

This small survey, allows our team at CrescentByte to gauge user feedback so that we may further enhance our product to cater to your needs. Please leave honest advice on how you found our service to be.

maynarde.joseph@gmail.com [Switch account](#) 

Not shared

* Indicates required question

How easy was it to navigate our platform? (Scale from 1 to 5, where 1 is very difficult and 5 is very easy) *

1 2 3 4 5

Very Difficult Very Easy

Which feature do you find most valuable, and why? *

Your answer

Are there any features you felt were missing or could be improved? *

Your answer

How engaged do you feel with our platform's community? *

1 2 3 4 5

Not engaged at all Heavily engaged

What can we do to improve your sense of community or support around our platform?

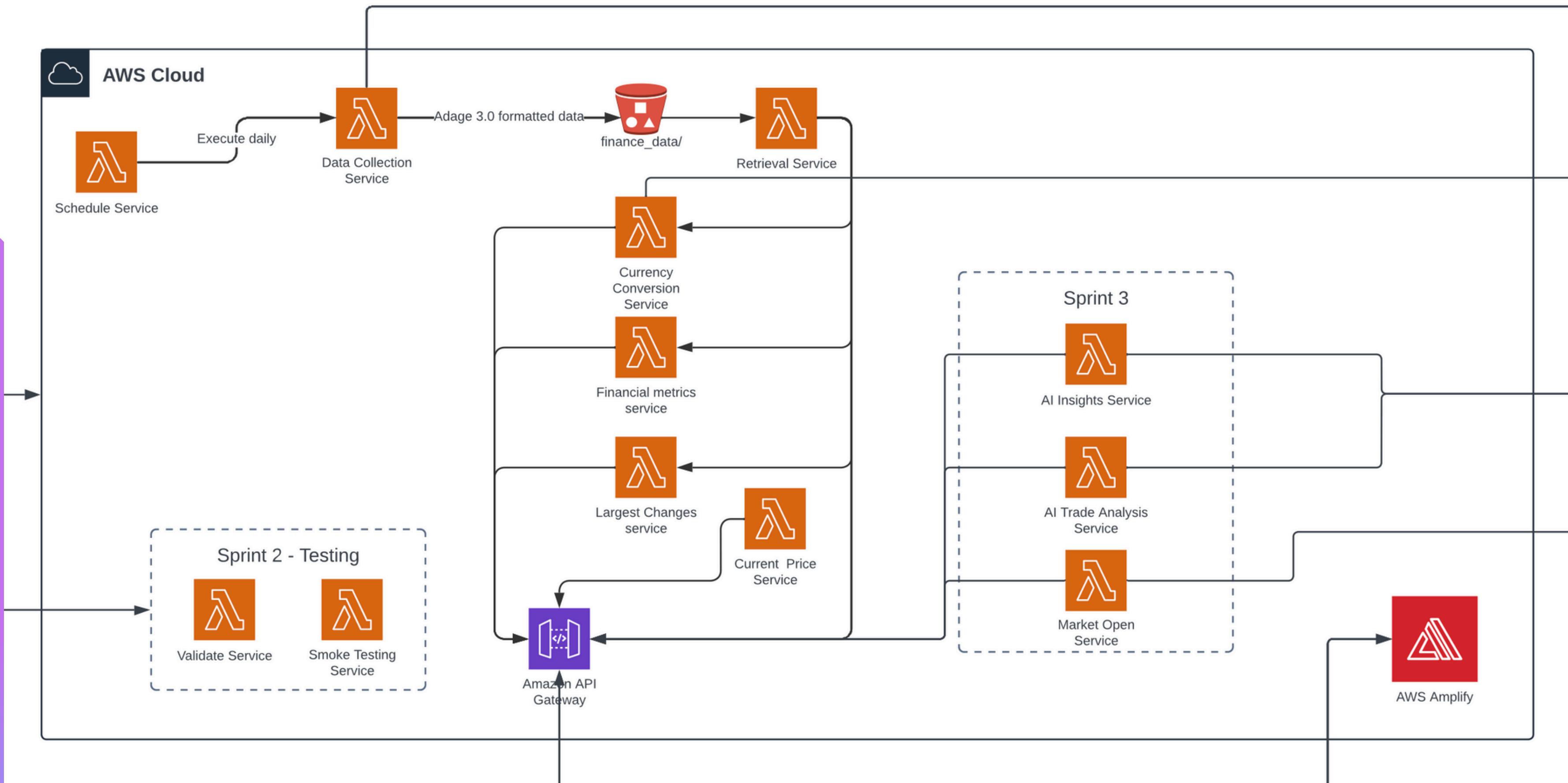
Your answer

What is your overall satisfaction with our platform? (Scale from 1 to 5) *

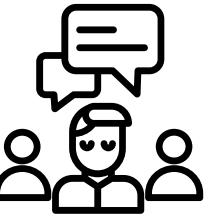
1 2 3 4 5

Not satisfied at all Extremely satisfied

Architecture



Communication



Screenshot of a Slack channel named '# pull-requests' in the SENG3011 workspace. The channel is for sending and discussing pull requests. A message from user Fareed at 03/29/2024 5:26 PM discusses Pull Request 54, which was created on March 29, 2024. The link to the PR is provided: https://github.com/cseteaching-unsw-edu-au/F14B_CrescentByte_api-content/pull/54. The message includes sections for 'Update' and 'NOTE', mentioning smoke testing and CI/CD integration. It also includes code snippets and a 'Success Case' example. A 'Failure Case' section shows a screenshot of an AWS Lambda function test result with a status code of 400. A 'MAJOR NOTE' section emphasizes the importance of AWS Lambda roles. A message from Joseph at 03/29/2024 5:36 PM is also present.

Screenshot of a Slack direct message between Muhammad Raheel Raza (MR) and Fareed. Fareed sends a screenshot of a document titled 'Project Overview' at 11/04 11:37, asking for feedback on draft measures of success. Muhammad Raheel Raza replies at 11/04 12:30, saying he will have a look and inform Fareed. Fareed thanks him at 11/04 14:54.

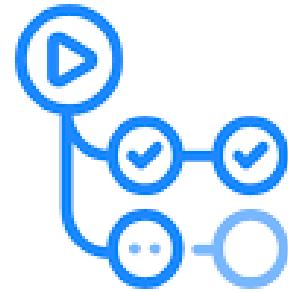
Screenshot of a Slack direct message between Muhammad Raheel Raza (MR) and another user. Muhammad Raheel Raza sends a link to a wiki page at 23/02 15:11: <https://unswcse.atlassian.net/wiki/spaces/F14BCRESCE/pages/371132723/Questions+for+Tutor>. He thanks the user at 23/02 15:11. The user responds at 24 February, asking for answers to their queries. Muhammad Raheel Raza provides several numbered responses, including: 1. Data should be saved into S3; 2. Not quite sure about questions; 3. Can integrate other API services; 4. Can use DynamoDB; 5. Elastic Beanstalk is serverless; 6. Thanks for feedback. He also mentions context menu and error screenshots.

Testing Strategy

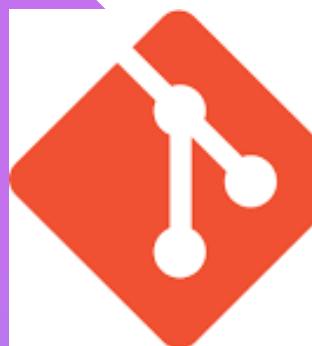
Jobs	succeeded 12 minutes ago in 1m 2s
check (3.10, code/retrieval)	
check (3.10, code/update_s3)	
check (3.10, code/scheduled)	
check (3.10, code/current_price)	
check (3.10, code/pre-processi...)	
check (3.10, code/currencies)	
check (3.10, code/largest_chan...)	
check (3.10, code/stock_info)	
check (3.10, code/validate)	
check (3.10, code/smoke_testing)	
Run details	
⌚ Usage	
⤵ Workflow file	
	▼ <input checked="" type="checkbox"/> Run Build Checks
	24 ===== test session starts =====
	25 platform linux -- Python 3.10.14, pytest-8.1.1, pluggy-1.4.0
	26 rootdir: /home/runner/work/F14B_CrescentByte_api-content/F14B_CrescentByte_api-content
	27 plugins: cov-5.0.0
	28 collected 9 items
	29
	30 code/currencies/tests/test_currency.py s..... [66%]
	31 code/currencies/tests/test_functions.py ... [100%]
	32
	33 ----- coverage: platform linux, python 3.10.14-final-0 -----
	34 Name Stmt Miss Cover
	35 -----
	36 code/currencies/src/__init__.py 0 0 100%
	37 code/currencies/src/codes.py 1 0 100%
	38 code/currencies/src/currency_converter.py 35 2 94%
	39 code/currencies/src/exceptions.py 16 2 88%
	40 code/currencies/src/handler.py 25 3 88%
	41 code/currencies/src/helper.py 11 1 91%
	42 code/currencies/tests/__init__.py 0 0 100%
	43 code/currencies/tests/conftest.py 6 0 100%
	44 code/currencies/tests/test_currency.py 33 6 82%
	45 code/currencies/tests/test_functions.py 65 4 94%
	46 -----
	47 TOTAL 192 18 91%
	48
	49

- Unit testing
 - Integration testing
 - Smoke testing
 - End to End testing

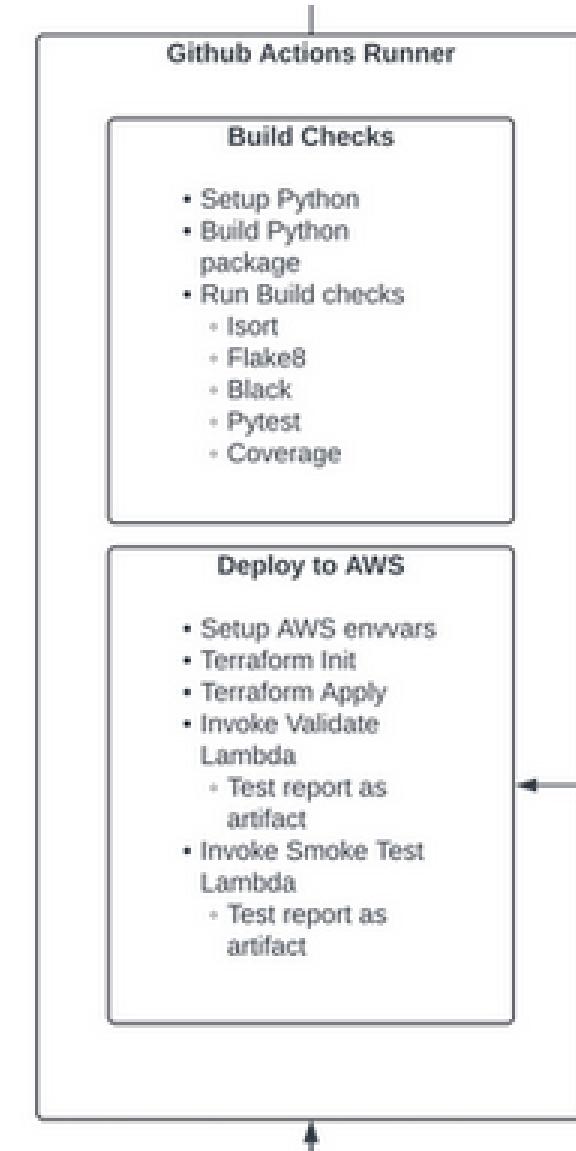
DevOps

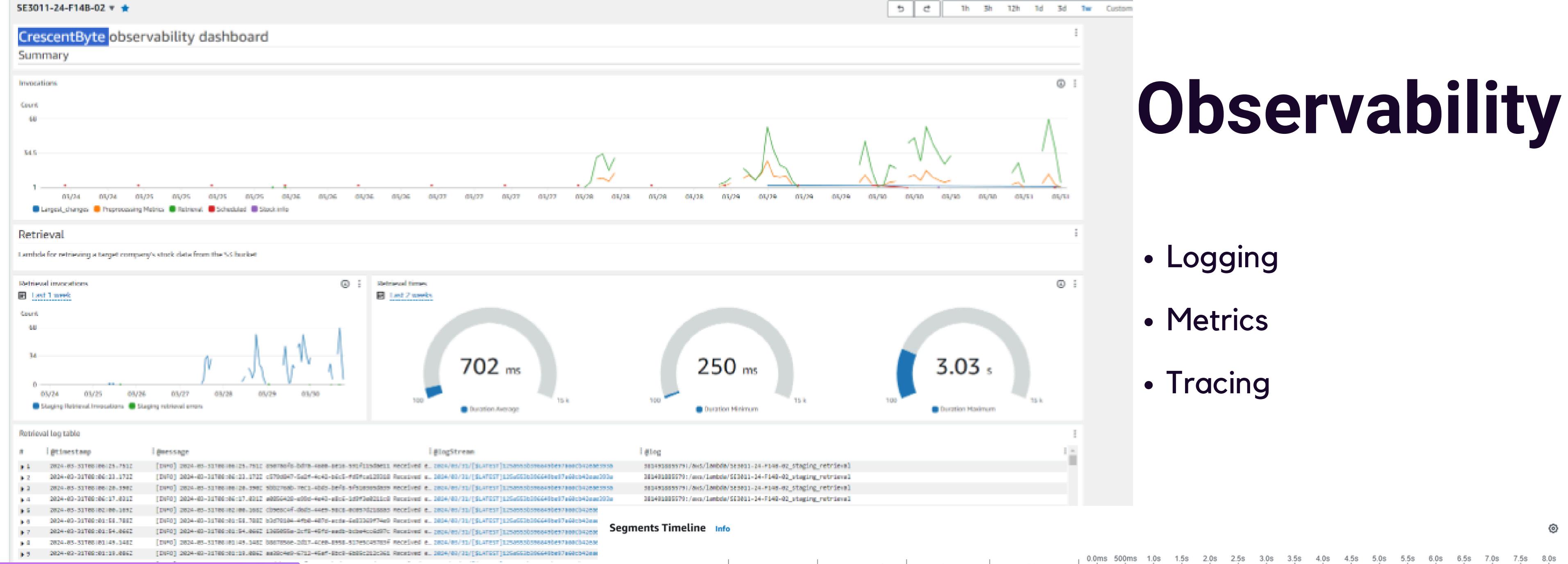


GitHub Actions



git



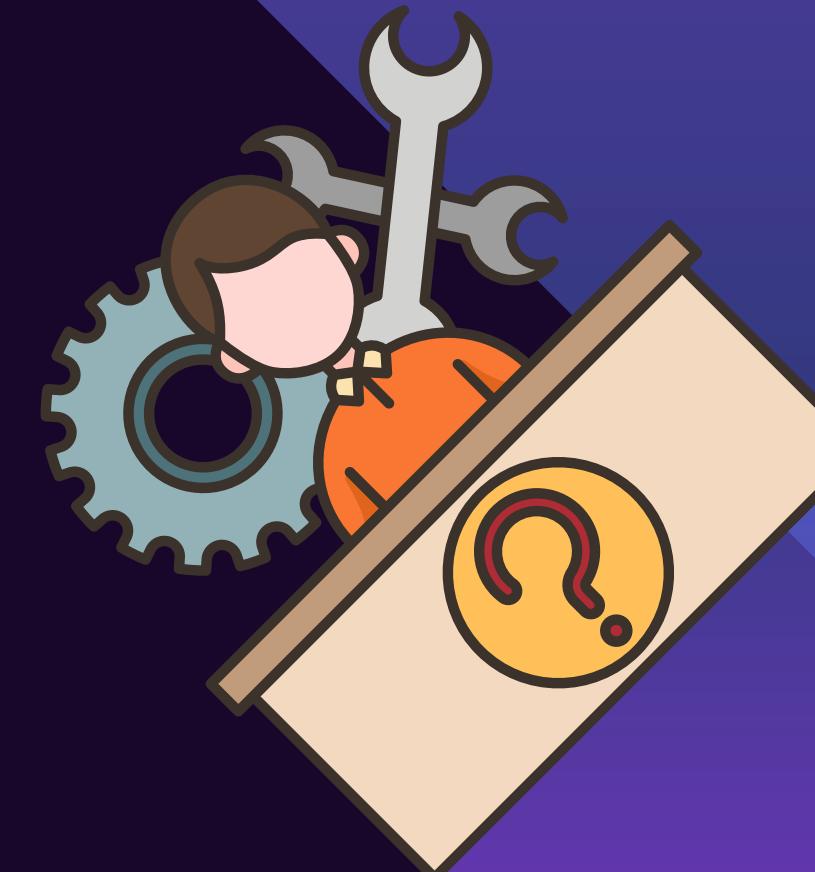


Observability

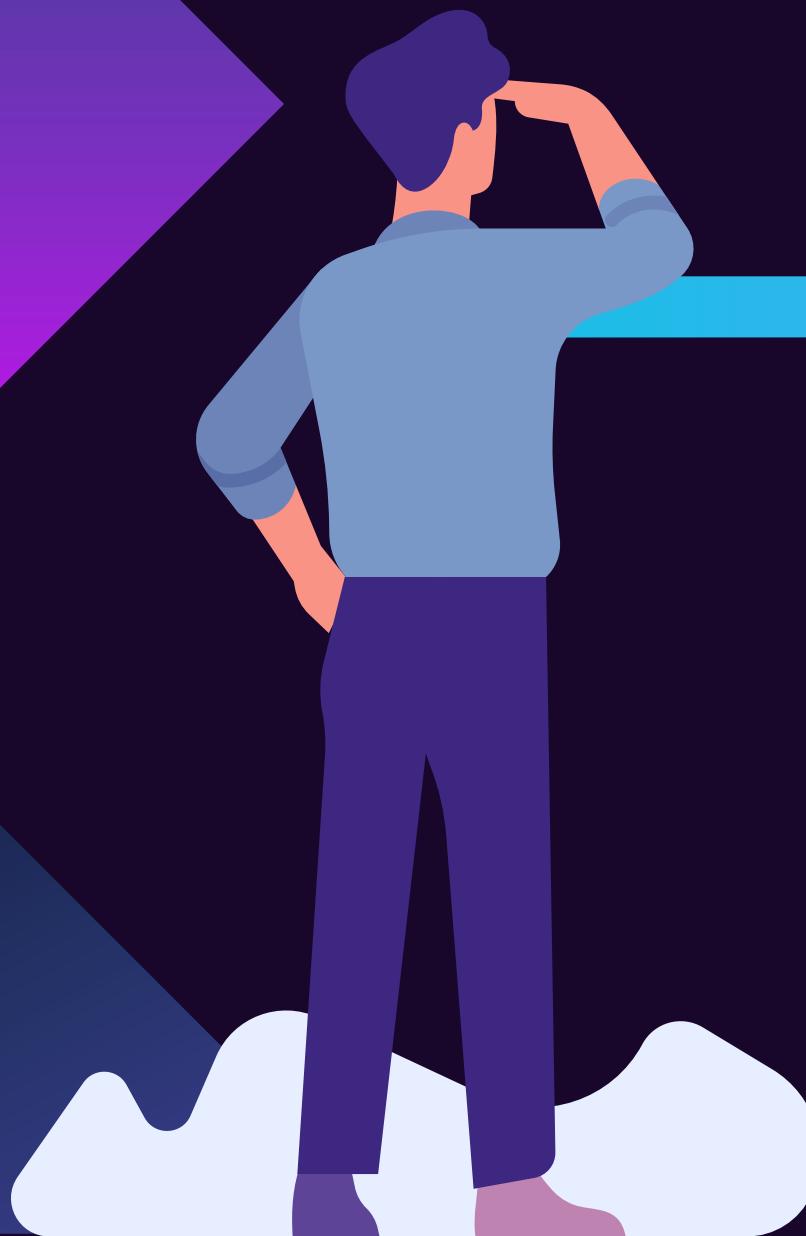
- Logging
- Metrics
- Tracing



Technical Challenges & Constraints



FUTURE PLANS



Order Book & Market Replay

- Realtime order book data at your finger tips
- Order book data stored daily for market replay
- Advanced analytics and backtesting



Price	Volume
29482.6	0.34022451
29482.2	2.59239545
29482.0	0.30610000
29481.8	2.54394441
29481.7	6.13736539
29481.6	4.69622945
29481.5	0.14797067
29481.4	0.00907284
29481.3	8.61166122
29481.3	USD ↑
29481.2	0.34533991
29481.0	0.06784030
29480.0	0.00100000
29479.8	0.00010641
29479.2	5.31893540
29475.0	2.79452092
29474.7	0.00351477
29472.9	0.10136635
29472.0	2.54478315

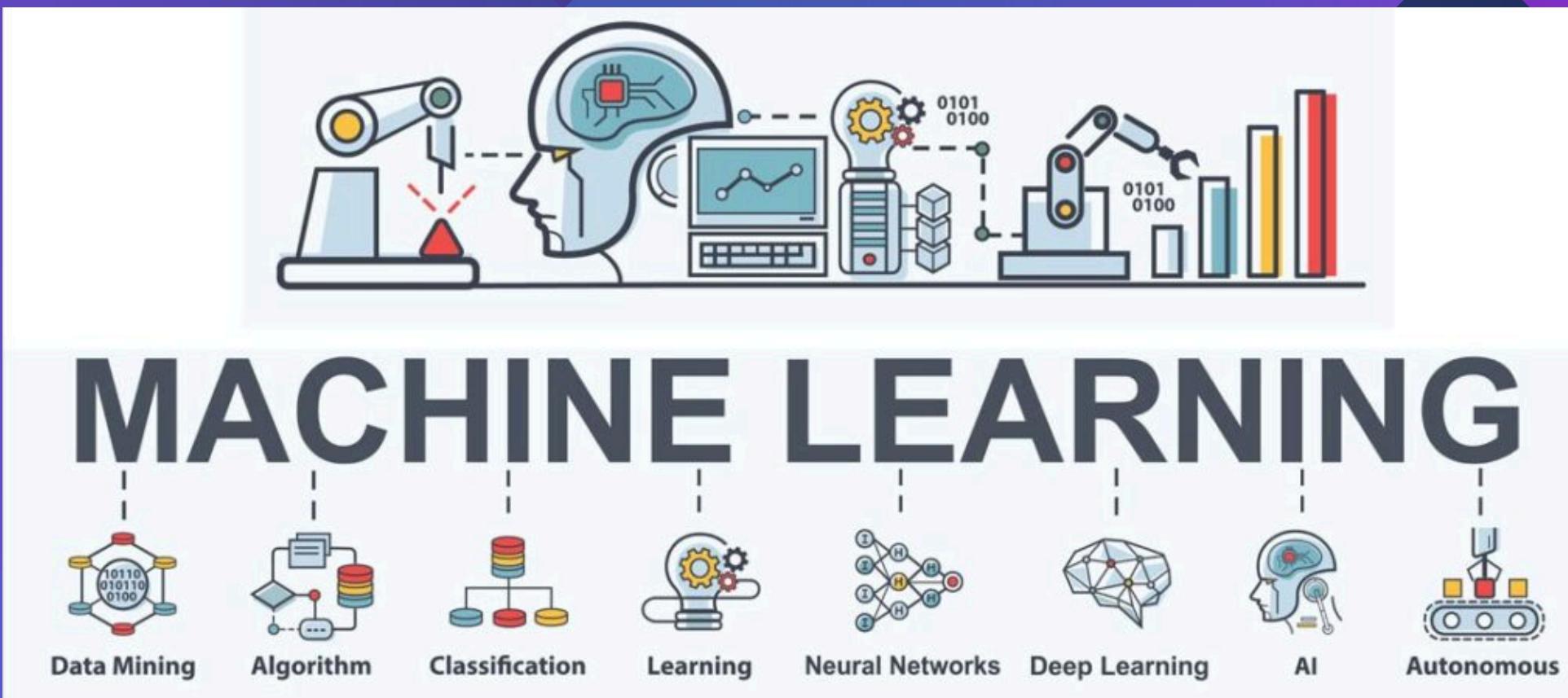


Machine Learning

**A Technical Overview
Of Machine Learning
For Stock Market
Prediction**



- Increased prediction accuracy
- Deep insights and trends
- Adapts to user preferences
- Smarter and faster trading decisions

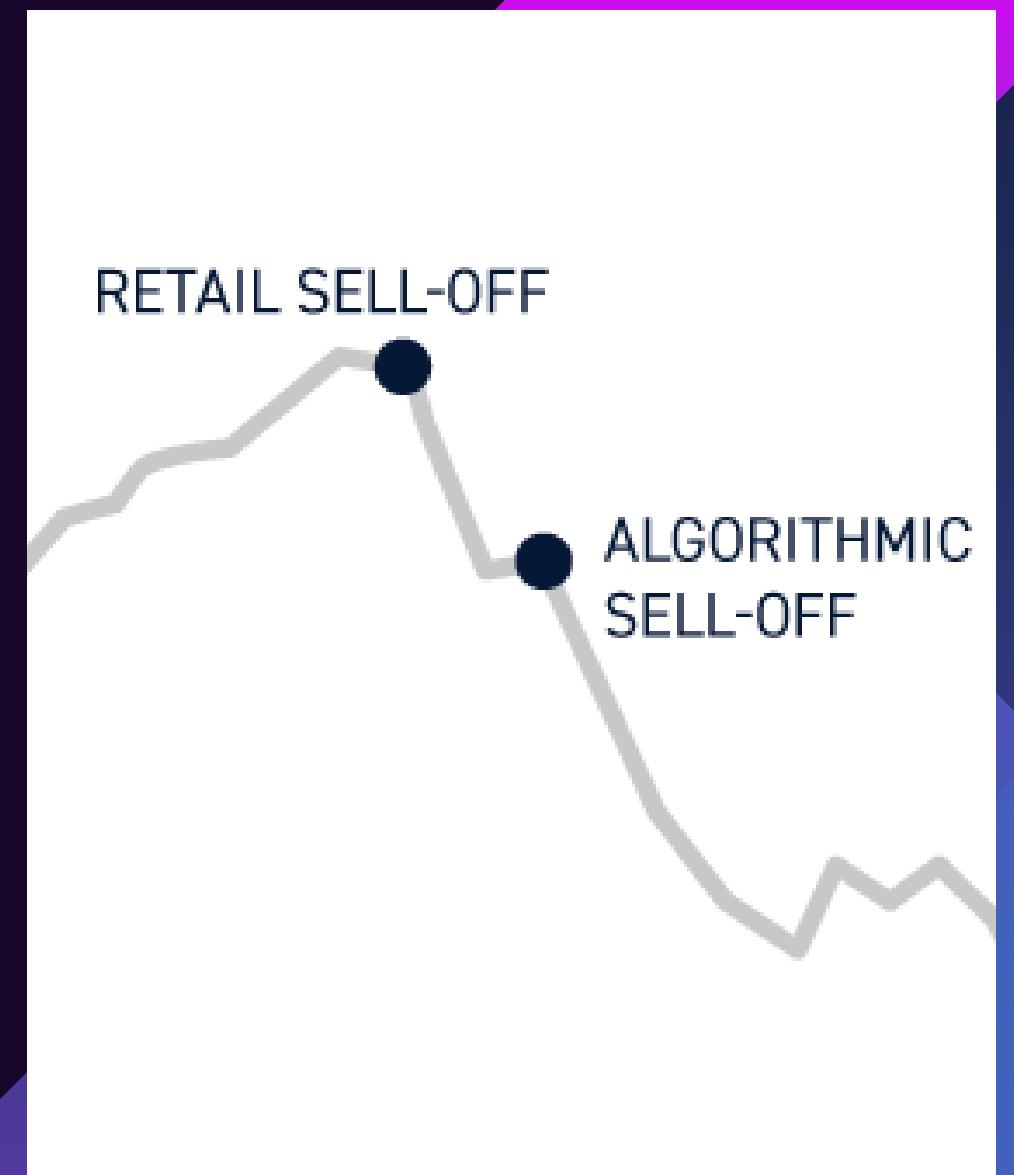
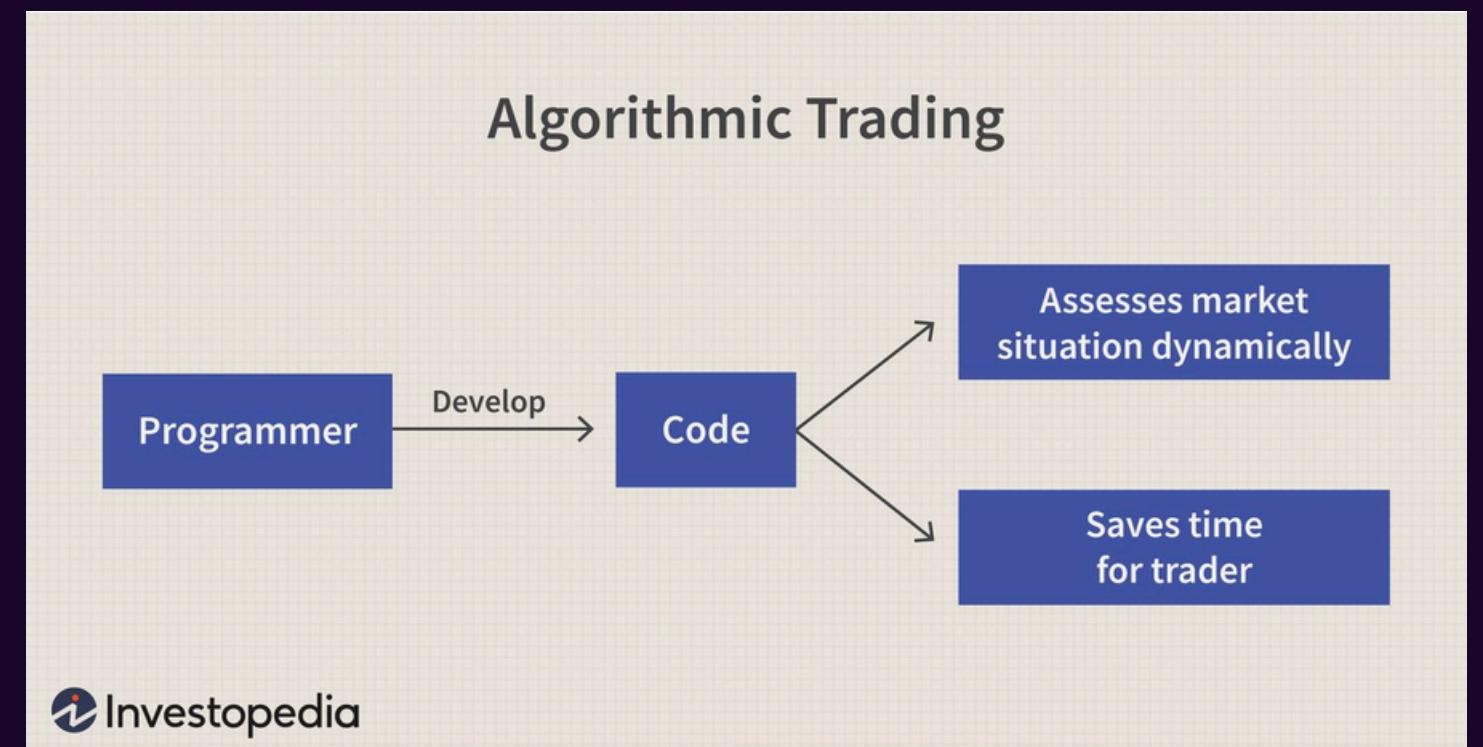


Trading Algorithm

 CRESCENTBYTE



- Deep market knowledge
- Personalised trading strategies
- Auto trade anywhere, anytime



THANK YOU

On Behalf of

 CRESCENTBYTE



