Databases II

AI-POWERED PREDICTIVE TRADING ANALYTICS PLATFORM

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SCHEDULE

01 Problem

02 Analysis

03 Solution

04 Results

PROBLEM:

01

The platform must ingest and analyze large volumes of real-time market data from multiple sources (e.g., MT5, Yahoo Finance, Alpha Vantage). Without proper optimization, this could overload the system and cause latency in alert delivery or trade execution.

02

The platform is expected to serve thousands of users, each generating frequent alerts, trades, and strategy interactions. Without a scalable architecture (horizontal scaling, load balancing, database sharding), performance can degrade as the user base expands

03

The system handles sensitive financial and personal data (trade histories, strategy configs, subscriptions), which are potential targets for cyberattacks. It also operates under various regulatory frameworks (e.g., GDPR, financial compliance).

ANALYSIS: USERS

01

Individual Traders

Looking for real-time alerts and automated trading based on AI-driven strategies.

Want to enhance performance with data insights and save time.

02

Advanced Traders

Require custom strategy configuration and AI model tuning.

Use backtesting and analytics for deeper control over trading behavior.

03

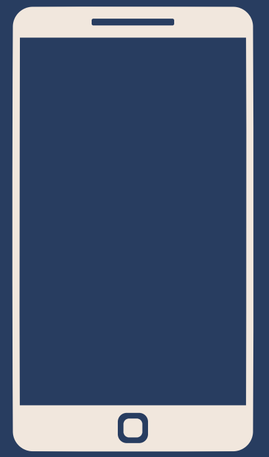
Portfolio Managers

Need tools for capital allocation, risk/reward monitoring, and daily strategy performance reports.

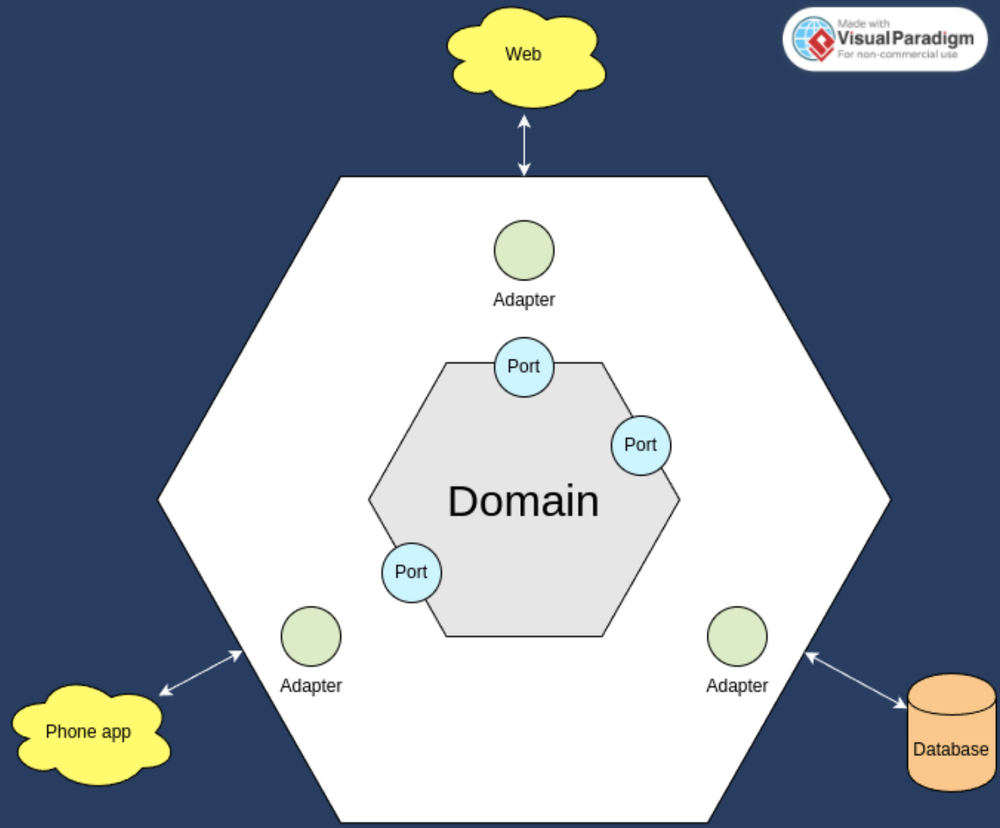
Use simulations and analytics to optimize fund performance.

SOLUTION:

A web and mobile platform offering AI-based trading alerts, strategy analysis, and automated execution.
Supports various user types from beginners to professionals.



SOLUTION:

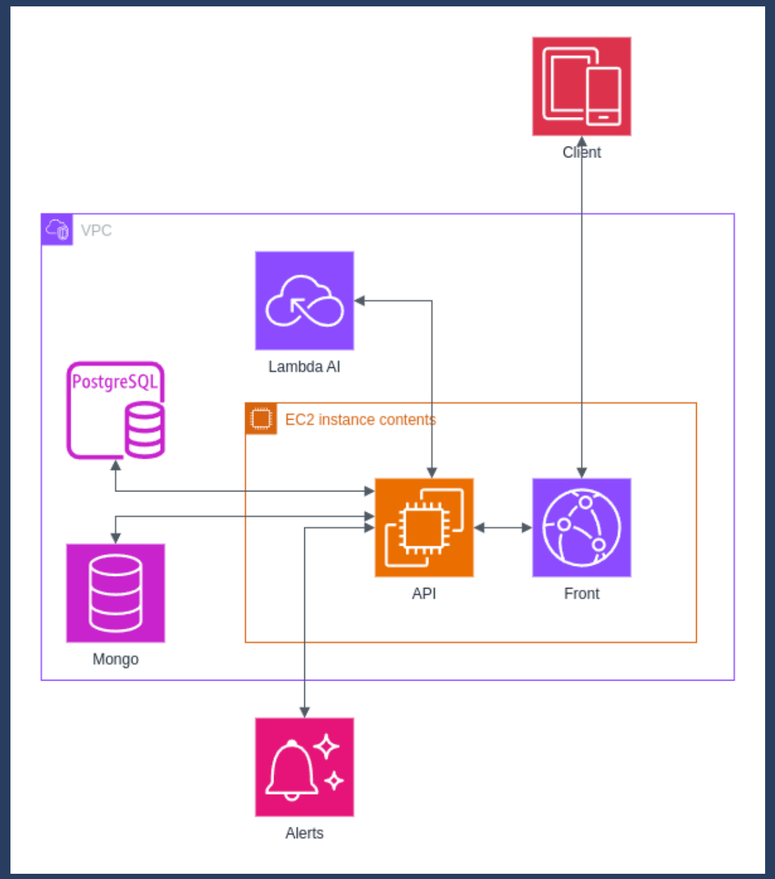


snowflake®

mongoDB.

PostgreSQL

SOLUTION:


Client
VPC
Lambda AI
PostgreSQL
EC2 instance contents
API
Front
Mongo
Alerts

IMPACT PROJECTION:

01 Simulated performance based on backtests.

02 Expected benefits: time saved, improved risk/reward ratios, capital optimization.

03 User feedback goals and how success will be measured (e.g., % of profitable trades, user retention).