CODECELL - CMPN, VESIT

SYRUS HACKATHON 2025

Category Code: C3

Problem Statement Title: SeedLings

Team Name: FireFlow

Institute Name: Vivekanand Education Society's Institute of Technology

Idea / Approach details (& implemented features)

As per report, Study On Financial Problems Faced By New Start-Up:

1. Startups seeking investment often **struggle with credibility and financial validation**.
2. Investors, face challenges in assessing the legitimacy and financial health of startups.

Solution:

1. Dynamic Credibility Score Generator Powered by Uptiq AI
2. Dynamic Trust Score Generator Powered by Uptiq AI
3. Some Additional tools to help out startups
   a. Debt Optimization
   b. Loan Assessment
   c. Document Validation

Innovation (Showstopper)

1. Intelligent Startup-Investor Matchmaking Powered by Uptiq AI
2. Investors can schedule zoom calls with their chosen startup
3. AI-Driven Credibility and Trust Scoring to fill the trust gap between startups and investors
4. Documents Validation for startups to identify the hidden false patterns & mistakes

Uptiq Agent (explain in detail)

AI agents created : *(added to github)*

1. Credibility Score calculation
2. Investor Trust Scoring
3. Debt Equity Optimization with Risk Assessment
4. Loan Assessment Tools

The reports for all these will be stored in Uptiq Tables and will be fetched from it

Dynamic Credibility Score Calculation AI Agent

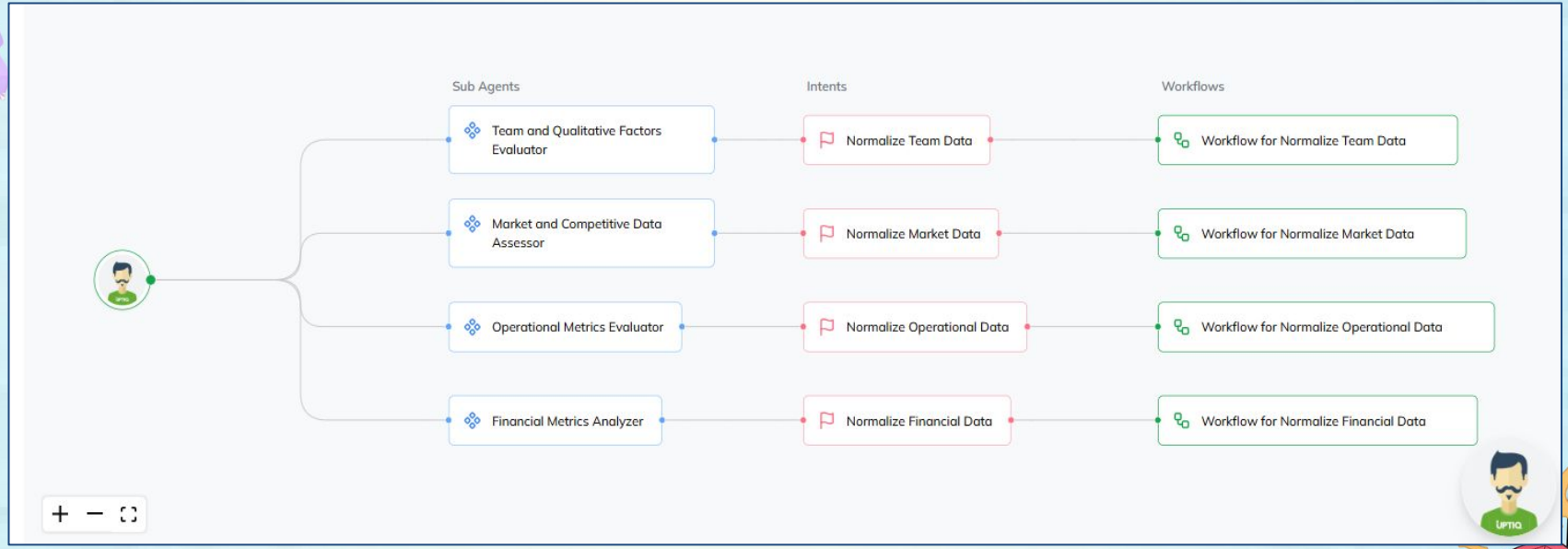
Why?

- Startups who don’t use credit cards or loan they may not have any CIBIL Score
- CIBIL score represents your creditworthiness based on your past borrowing and repayment history
- Instead of lying on CIBIL Score,we require a metric which will represent creditworthiness of Startup

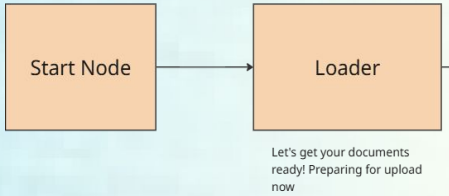
Dynamic Credibility Score Comes into the picture

- **It takes in consideration the various metrics of company performance**
  - **Financial Metrics**
  - **Operational Metrics**
  - **Market & Competitive Data**
  - **Team & Qualitative Factors**
- **Normalize all the values and then find the Score**

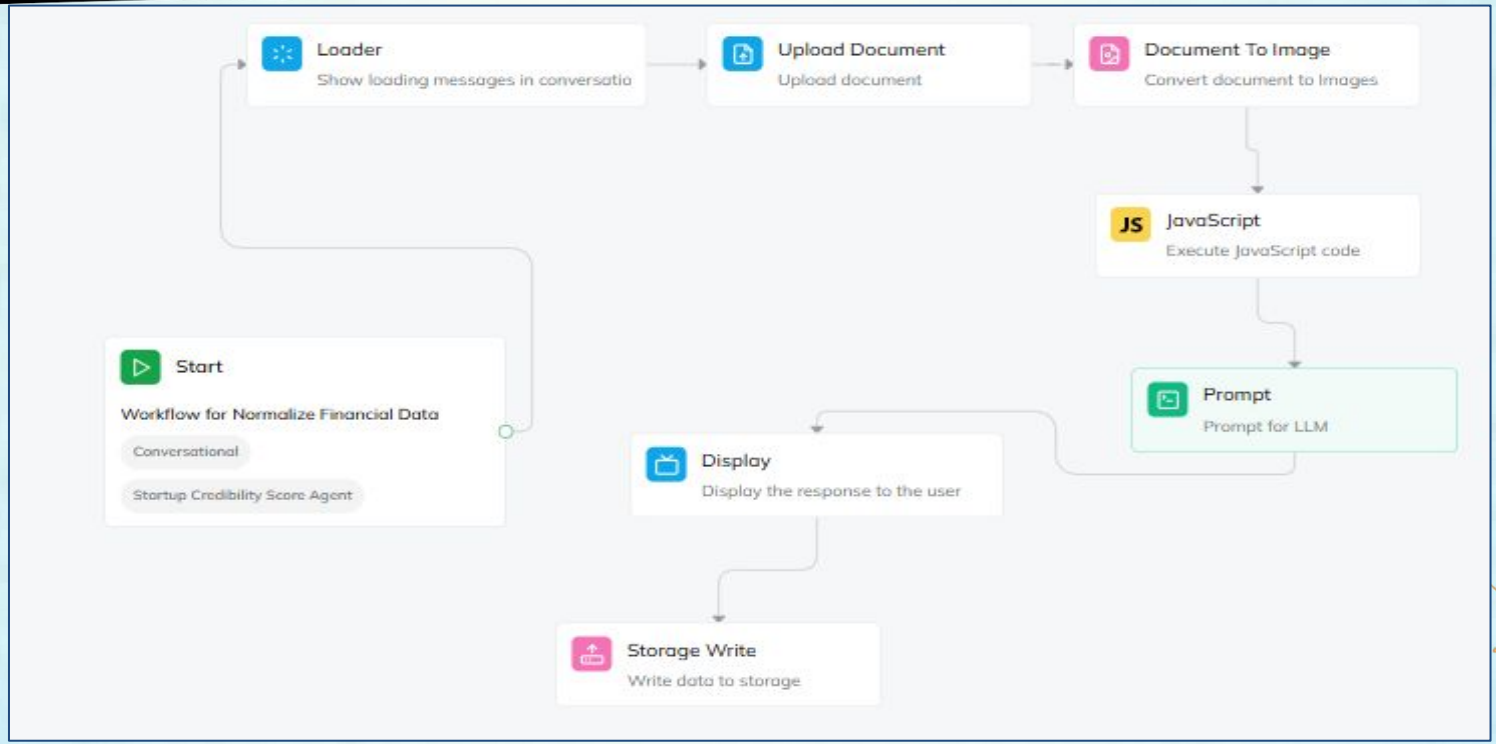
Dynamic Credibility Score Calculation AI Agent Uptiq SS



Dynamic Credibility Score Calculation AI Agent

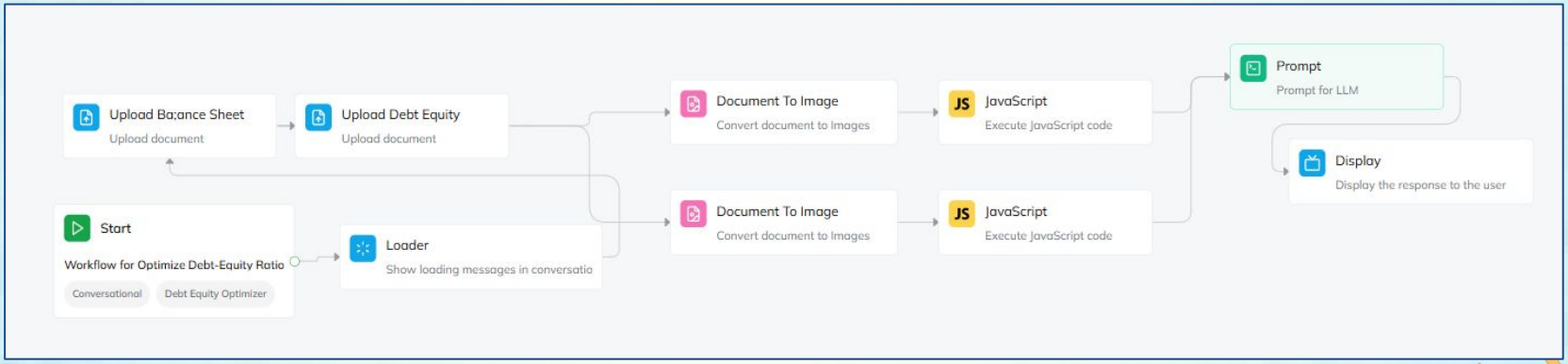


Dynamic Credibility Score Calculation AI Agent Uptiq SS



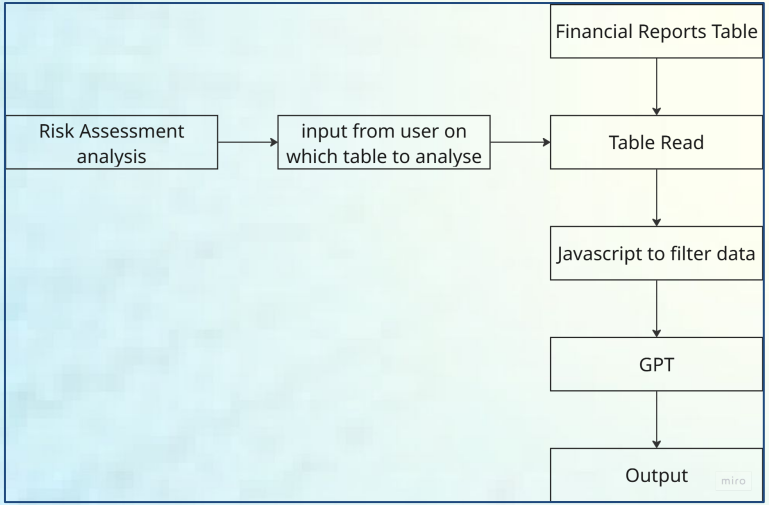
Debt Equity Optimization

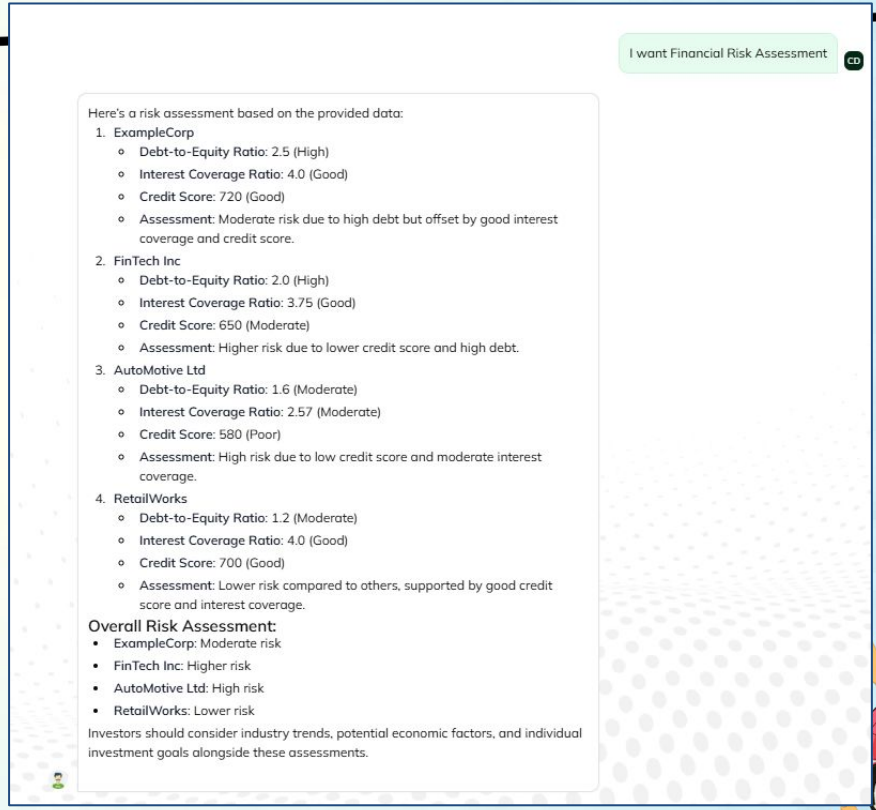
Debt Equity Optimization : give optimization based on balance sheet and debt equity report



Risk Assessment

It uses Financial report to assess risk





I want Financial Risk Assessment

Here's a risk assessment based on the provided data:

1. ExampleCorp
   - **Debt-to-Equity Ratio**: 2.5 (High)
   - **Interest Coverage Ratio**: 4.0 (Good)
   - **Credit Score**: 720 (Good)
   - **Assessment**: Moderate risk due to high debt but offset by good interest coverage and credit score.
2. FinTech Inc
   - **Debt-to-Equity Ratio**: 2.0 (High)
   - **Interest Coverage Ratio**: 3.75 (Good)
   - **Credit Score**: 650 (Moderate)
   - **Assessment**: Higher risk due to lower credit score and high debt.
3. AutoMotive Ltd
   - **Debt-to-Equity Ratio**: 1.6 (Moderate)
   - **Interest Coverage Ratio**: 2.57 (Moderate)
   - **Credit Score**: 580 (Poor)
   - **Assessment**: High risk due to low credit score and moderate interest coverage.
4. RetailWorks
   - **Debt-to-Equity Ratio**: 1.2 (Moderate)
   - **Interest Coverage Ratio**: 4.0 (Good)
   - **Credit Score**: 700 (Good)
   - **Assessment**: Lower risk compared to others, supported by good credit score and interest coverage.

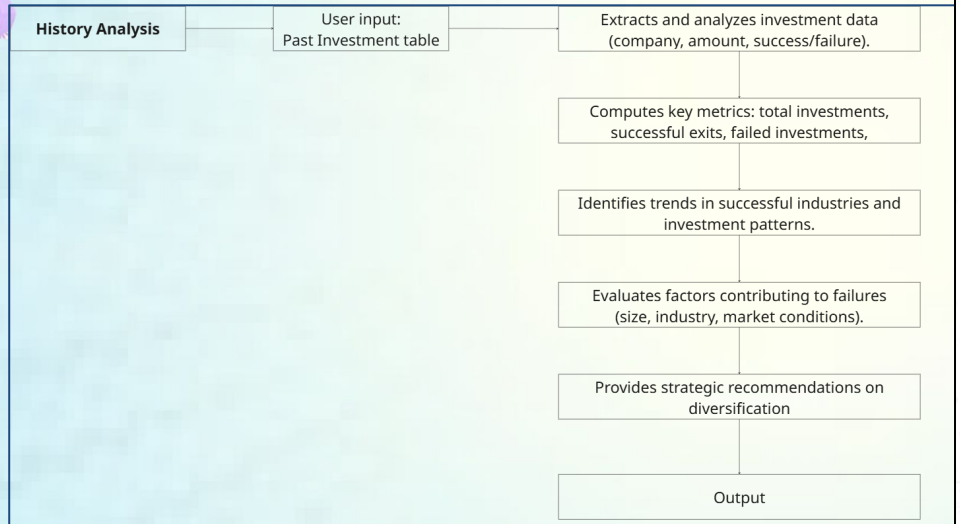
Overall Risk Assessment:

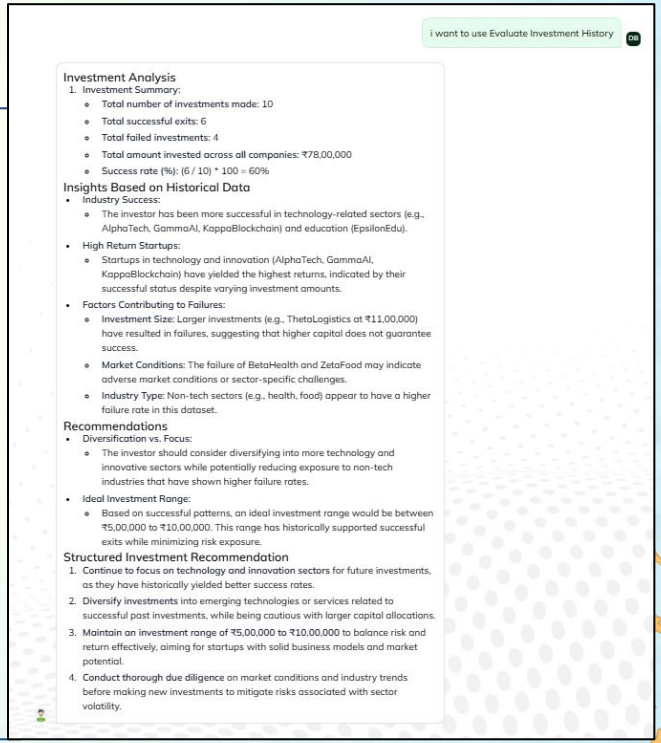
- **ExampleCorp**: Moderate risk
- **FinTech Inc**: Higher risk
- **AutoMotive Ltd**: High risk
- **RetailWorks**: Lower risk

Investors should consider industry trends, potential economic factors, and individual investment goals alongside these assessments.

History Assessment

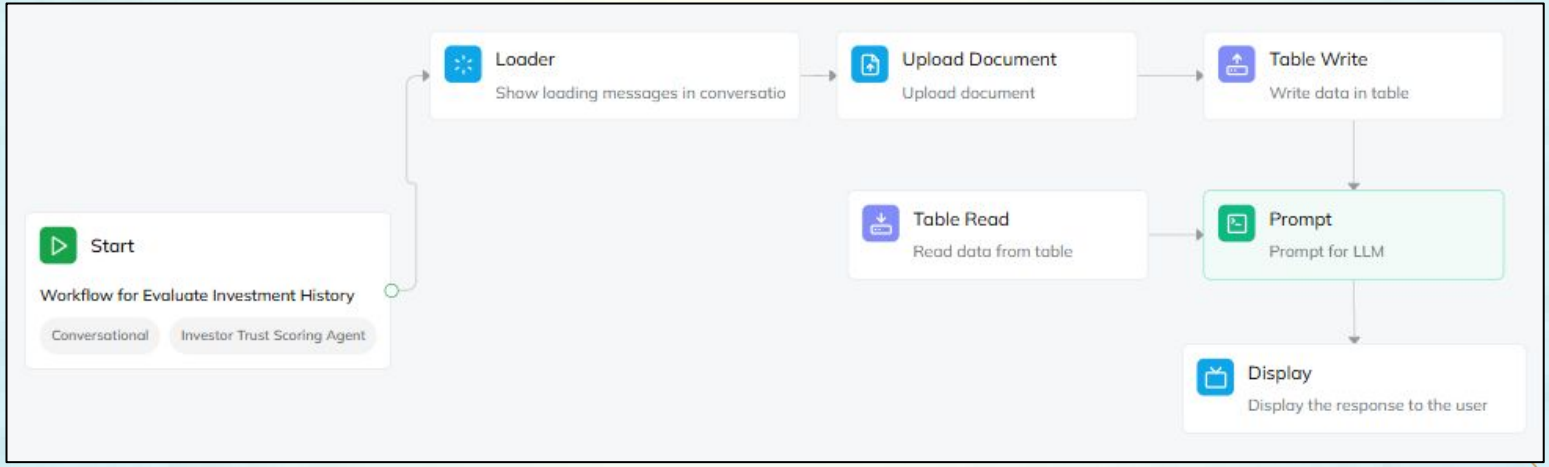
History Analysis





History Assessment

History Analysis



Important Ratio Calculation

JavaScript function to Calculate important financial ratios for ai agents to use

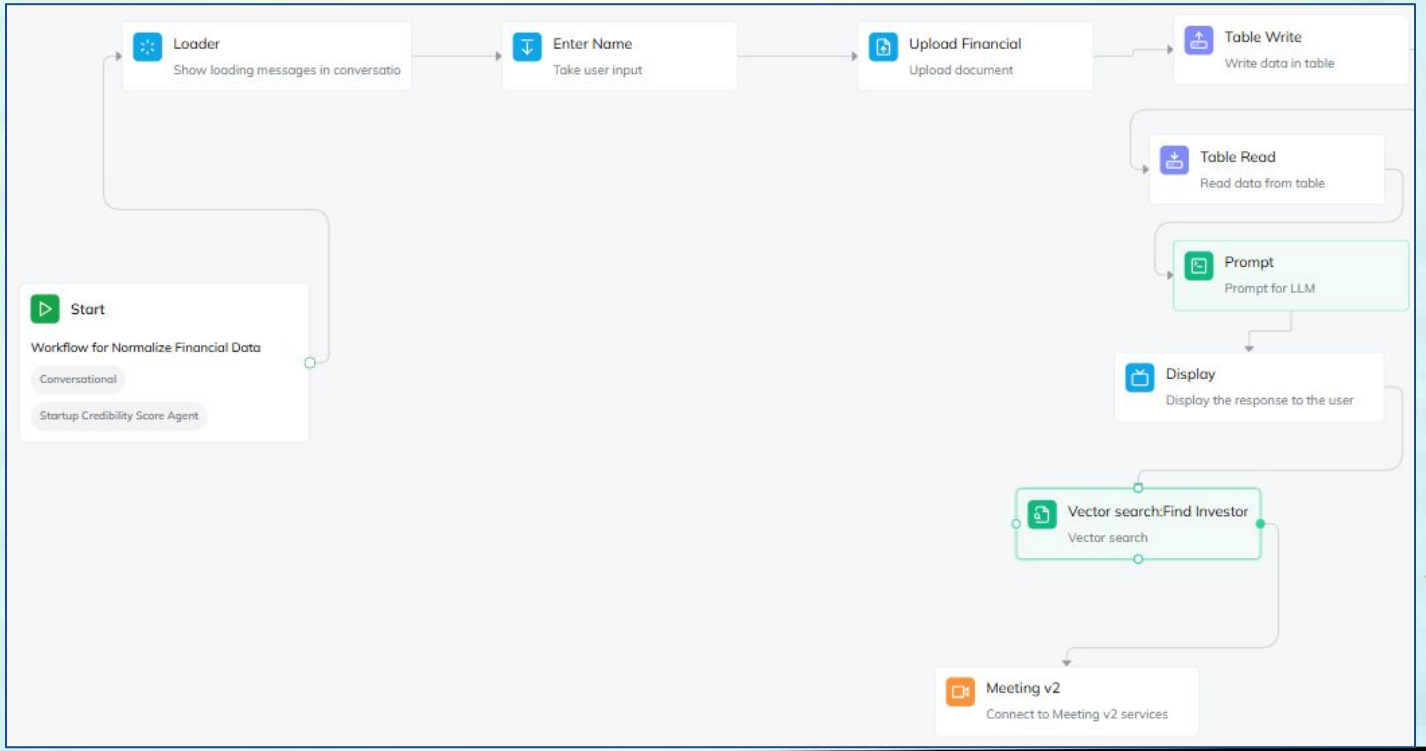
Ratio calculation

Ratio calculation

```
const main = () => {
    let csvString = input.data;
    let records = parse(csvString, { columns: true });

    let results = records.map(row => {
        let debt = parseFloat(row["Debt (USD)"]);
        let equity = parseFloat(row["Equity (USD)"]);
        let ebit = parseFloat(row["EBIT (USD)"]);  // Assume EBIT as Net Income

        let debtToEquity = equity > 0 ? (debt / equity).toFixed(2) : "N/A";
        let returnOnEquity = equity > 0 ? ((ebit / equity) * 100).toFixed(2) + "%" : "N/A";

        return {
            "Company Name": row["Company Name"],
            "Debt-to-Equity Ratio": debtToEquity,
            "Return on Equity (ROE)": returnOnEquity
        };
    });

    console.log("Financial Ratios Calculation:");
    console.table(results);
}
```

Addition after First Round

Startup Flow (Store their data, get credibility score and find the best investor)



Startup Flow Explanation

1 . The Startup Company enters their Name
2. The company uploads their balance sheet, debt equity sheet and cashflow which are then stored in Tables
3. The name of the company and the datasets are stored
4. Based on these datasets a credibility score is generated for the startup company
5. Now the agent suggest various investors matching the startup company
6. A google is scheduled between both the parties

RAG (Structure) for balance sheet

RAG > RAG Containers

test

RAG Details: test

Vector Store	No. of Candidates	Generation LLM
test	5	GPT 4 Turbo (Azure)

Vector Store : test

Data Store	Database	Embedding Model	Distance Strategy
testdatastore	MongoDB	OpenAI - text-embedding-3-large	Cosine Similarity

Data Store : testdatastore

No. of data sources	Metadata Extraction Workflow	Filter Fields	Enable PII Masking
1	-	-	NO

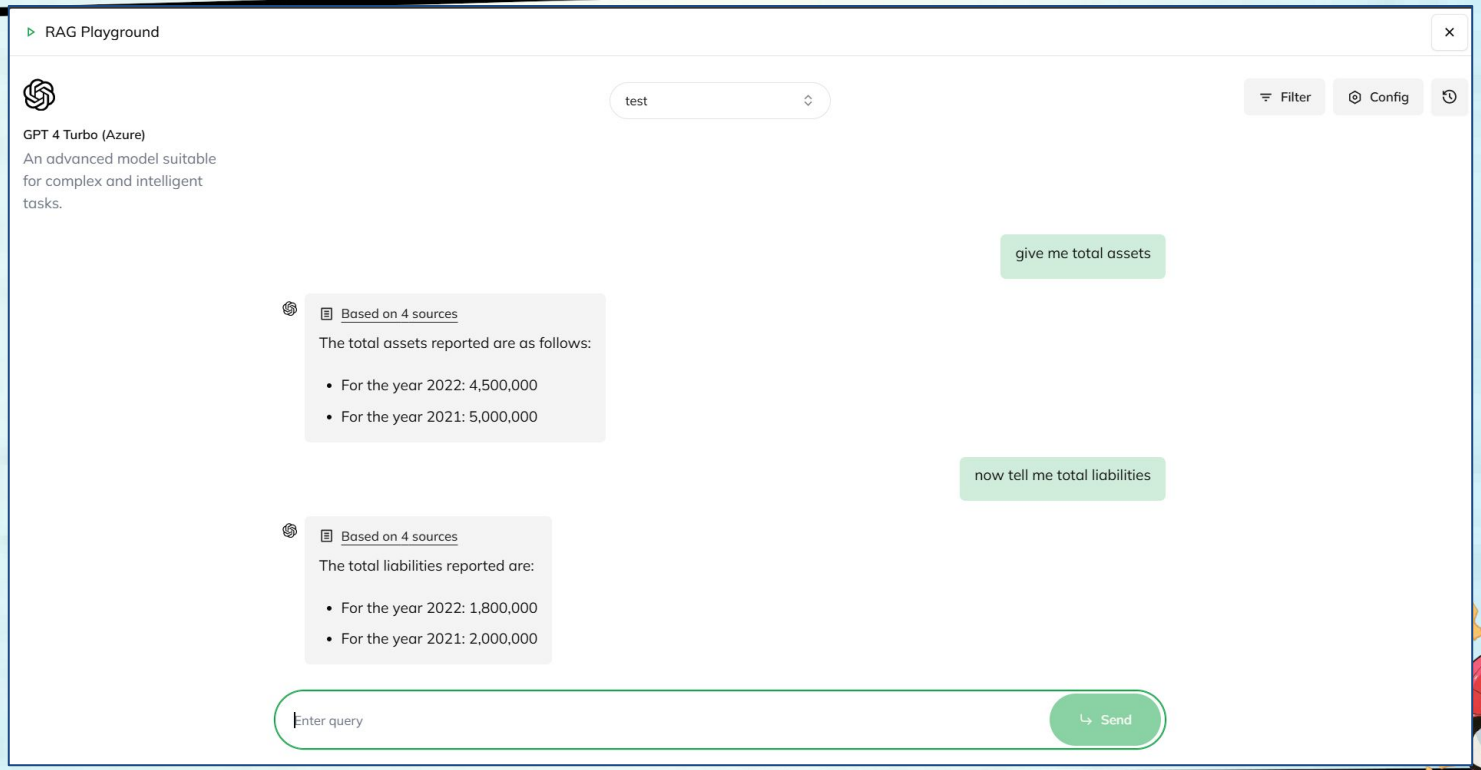
Data Sources:

BalanceSheet
CSV File - 177 Bytes
Chunking Strategy: - Recursive Character Splitting

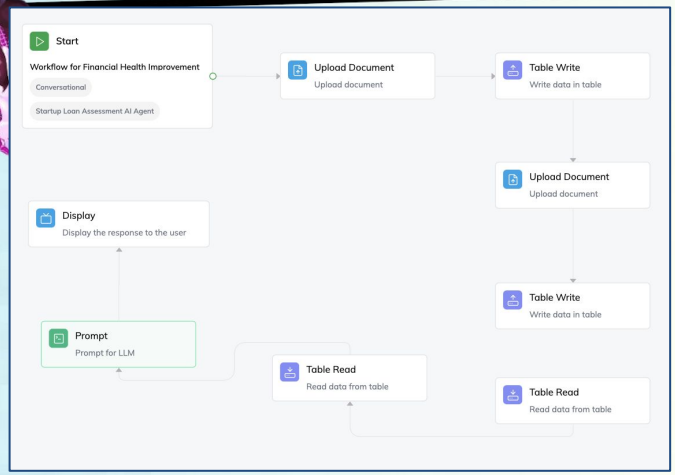
View Chunks

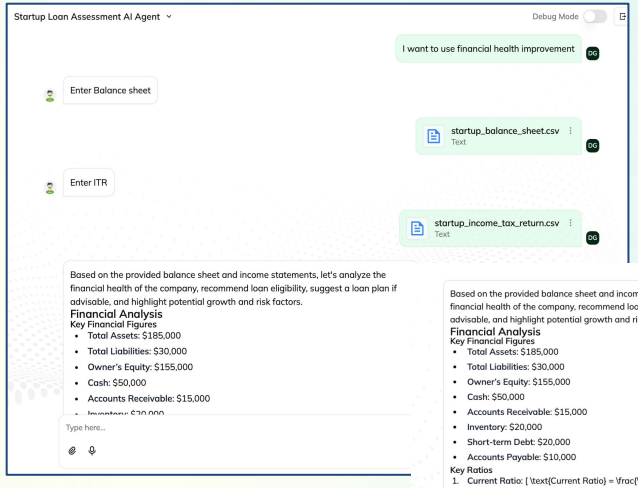
Upload File

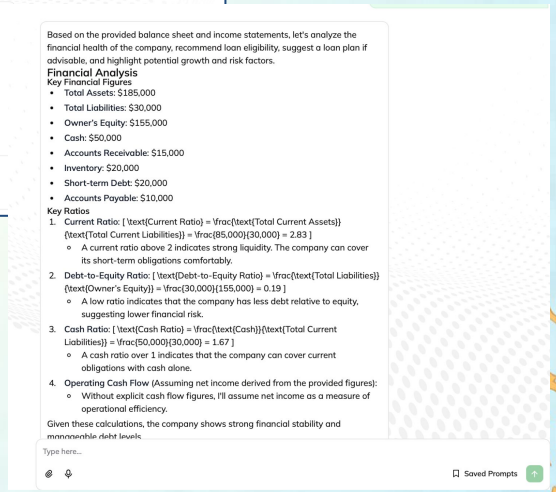
RAG (Implementation Outputs)



Loan Assessment Agent



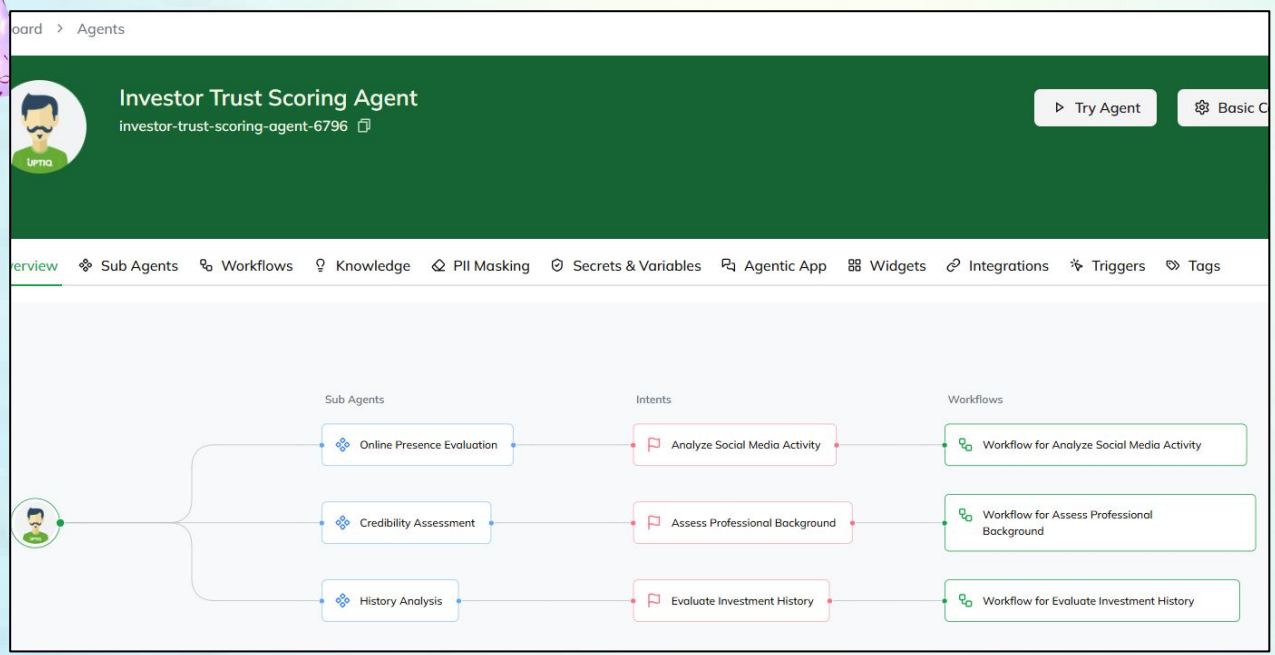




A **Loan Assessment Agent** evaluates financial data to determine loan eligibility, suggest optimal loan plans, and provide risk and growth insights.

Investor Trust Scoring Agent

There are 3 Sub-Agents :-



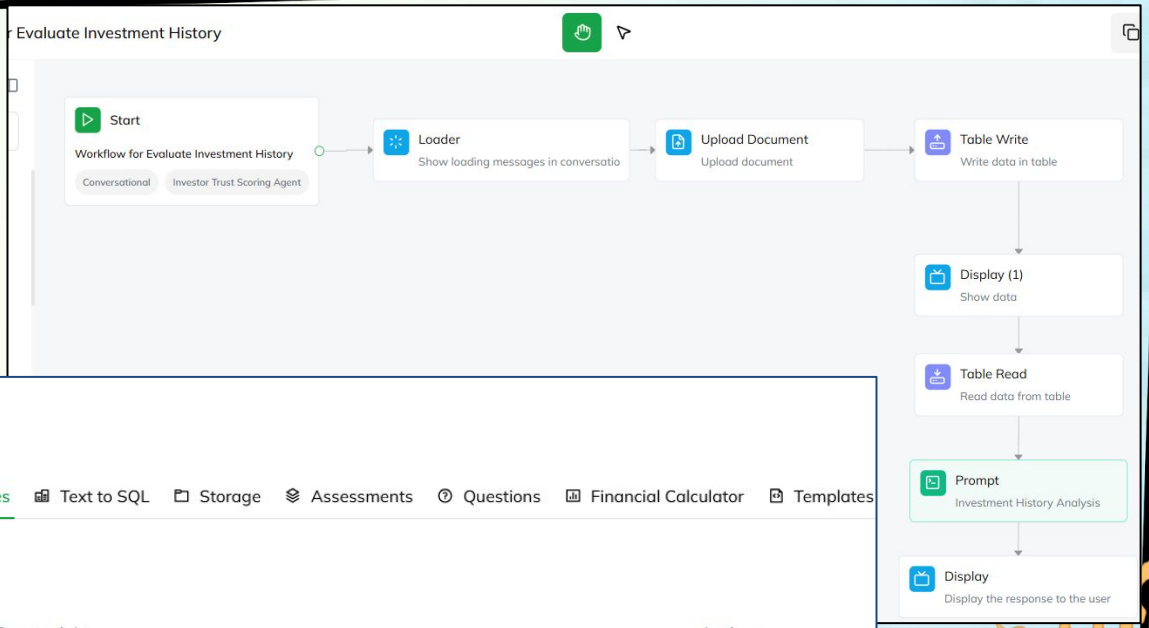
Online Presence Evaluation - Assesses social media activity to analyze an investor's digital footprint.

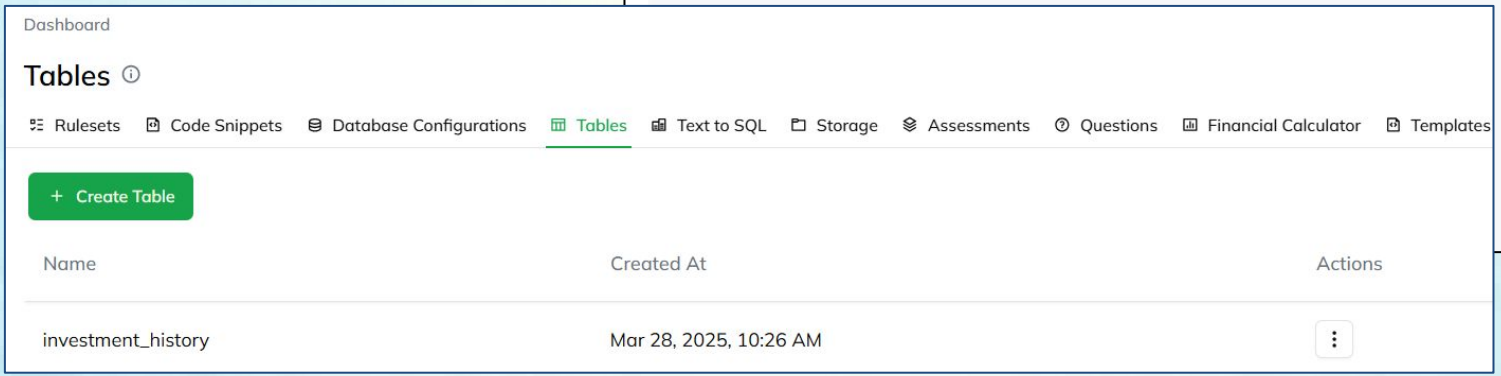
Credibility Assessment - Examines professional background to determine trustworthiness and reliability.

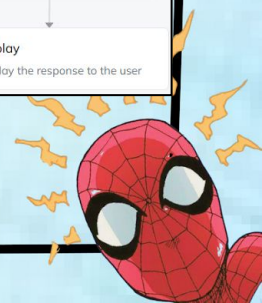
History Analysis - Reviews investment history to evaluate financial decision-making patterns.

Investor Trust Scoring Agent

1) Evaluate Investment History







Investor Trust Scoring Agent

1) Evaluate Investment History

Investment History Analysis

1. **Extracted Details:**
   - **Total Number of Investments Made:** 10
   - **Total Successful Exits:** 7
   - **Total Failed Investments:** 3
   - **Total Amount Invested Across All Companies:** ₹45,00,000
   - **Success Rate (%):** (\frac{7}{10} \times 100 = 70%)

Insights

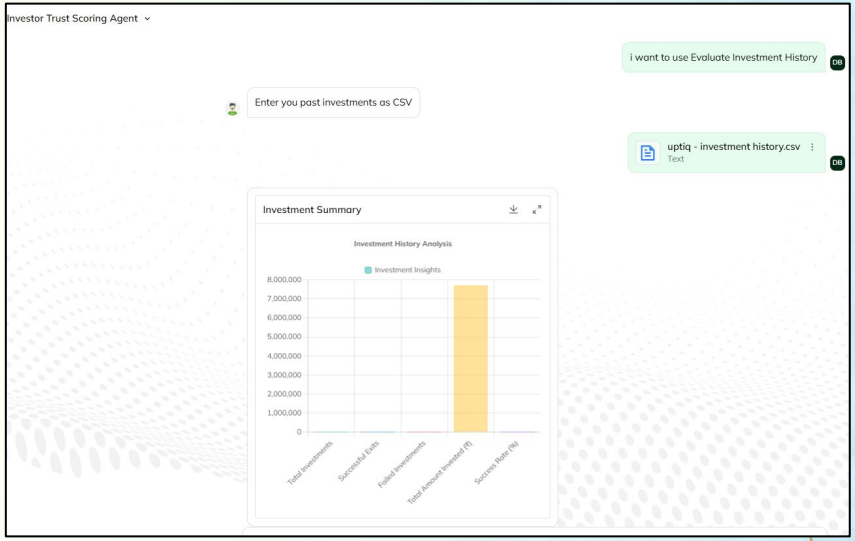
- **Has the investor historically been more successful in specific industries?**
  - Yes, the investor has been more successful in technology (e.g., AlphaTech, GammaAI) and finance (e.g., DeltaFin, KappaBlockchain).
- **What type of startups have resulted in the highest returns?**
  - Startups in technology and finance sectors have yielded the highest returns.
- **What factors contribute to failures?**
  - **Investment Size:** Smaller investments in certain sectors may not yield high returns.
  - **Industry:** Health and food sectors have shown higher failure rates.
  - **Market Conditions:** Economic downturns or changing consumer preferences can adversely affect startups.
- **Should the investor diversify or continue focusing on a specific sector?**
  - The investor should consider diversifying into emerging sectors (e.g., renewable energy, health tech) while continuing to focus on technology and finance, which have historically performed well.
- **Recommend the ideal investment range for future investments based on success patterns.**
  - The ideal investment range for future investments should be between ₹8,00,000 to ₹12,00,000, as this range has been associated with successful exits in the past.

Structured Investment Recommendation

1. Focus on Technology and Finance:
   - Continue investing in tech-driven startups and financial services, as these sectors have shown the highest success rates.
2. Diversification Strategy:
   - Explore investments in renewable energy and health tech, but limit initial investments to mitigate risk.
3. Investment Size:
   - Maintain investment amounts within the ₹8,00,000 to ₹12,00,000 range to balance risk and return.
4. Regular Review:
   - Conduct periodic reviews of market conditions and adjust investment strategies accordingly to adapt to changing trends.
5. Networking:
   - Engage with industry experts and attend sector-specific events to gain insights and identify promising startups.

By following these recommendations, the investor can enhance their portfolio performance and increase the likelihood of successful investments in the future.

Graphical summary followed by textual analysis



Graphical summary

Textual Investment History analysis

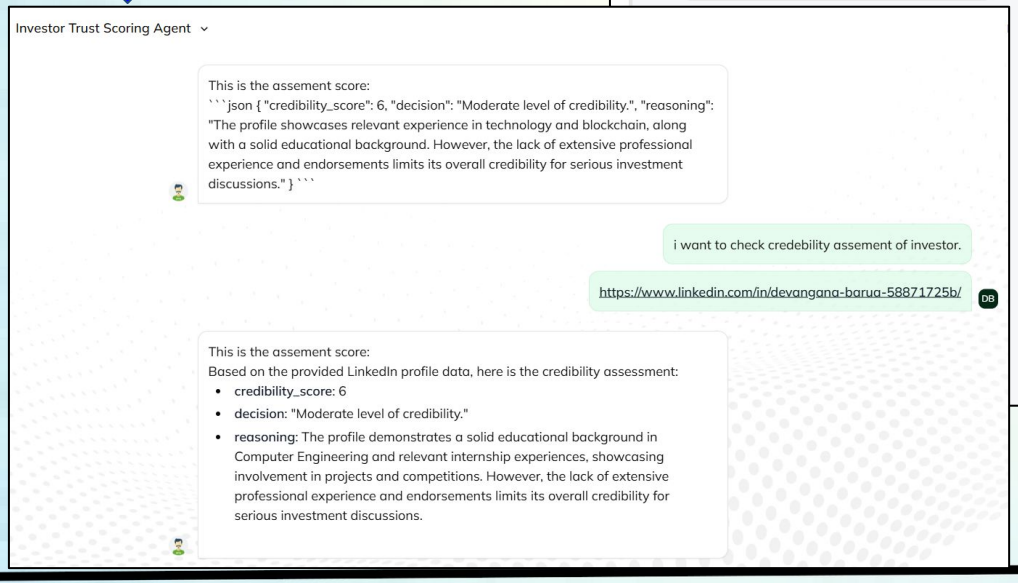
OUTPUTS for (1)

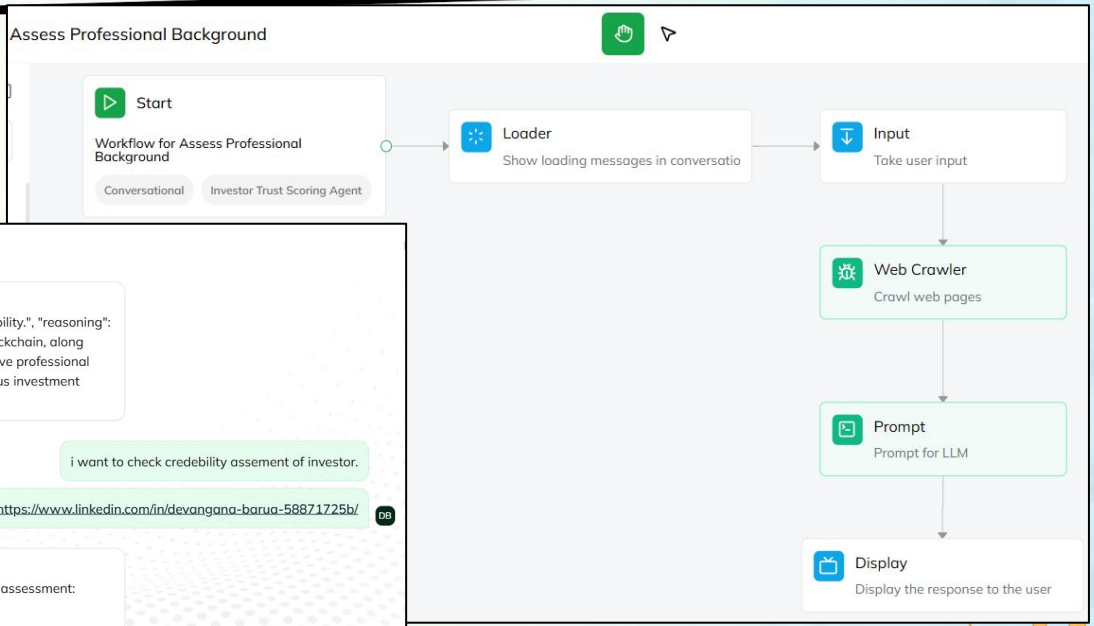
Investor Trust Scoring Agent

2) Assess Professional Background

OUTPUT for (2)

Assessment based on Professional Background (eg LinkedIn)





Investor Trust Scoring Agent

3) Assess Professional Background

OUTPUT for (3)

Fetching data from Social Media profiles using Web Crawlers and Analyse

i want to analyse social media activity

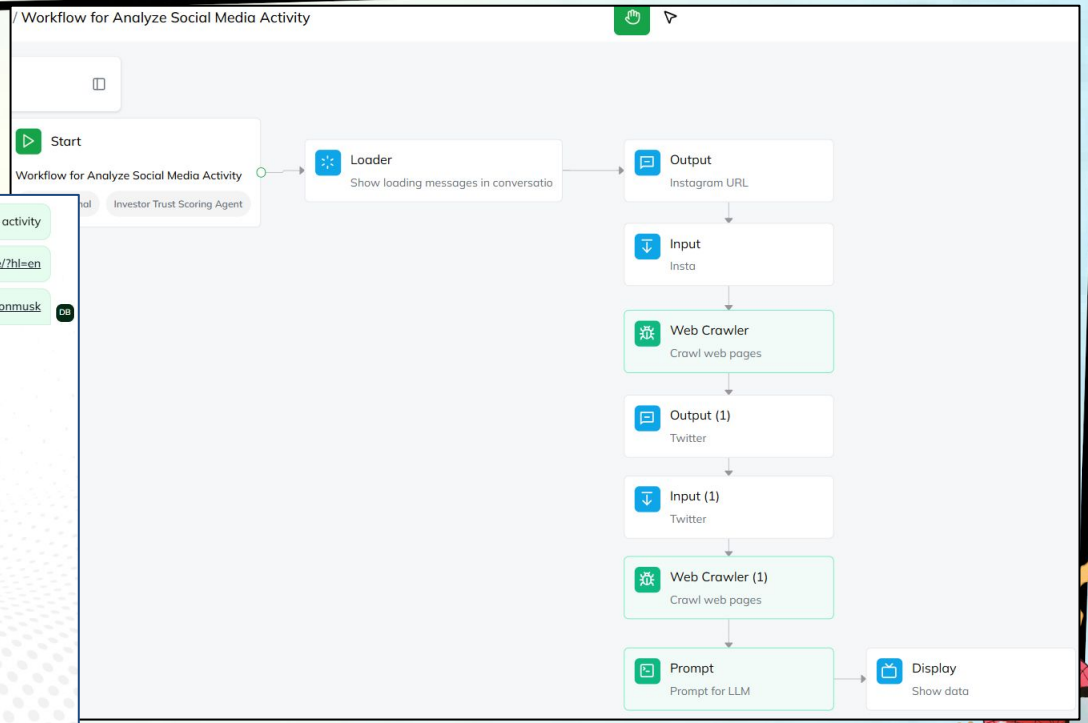
https://www.instagram.com/apple/?hl=en

https://x.com/elonmusk

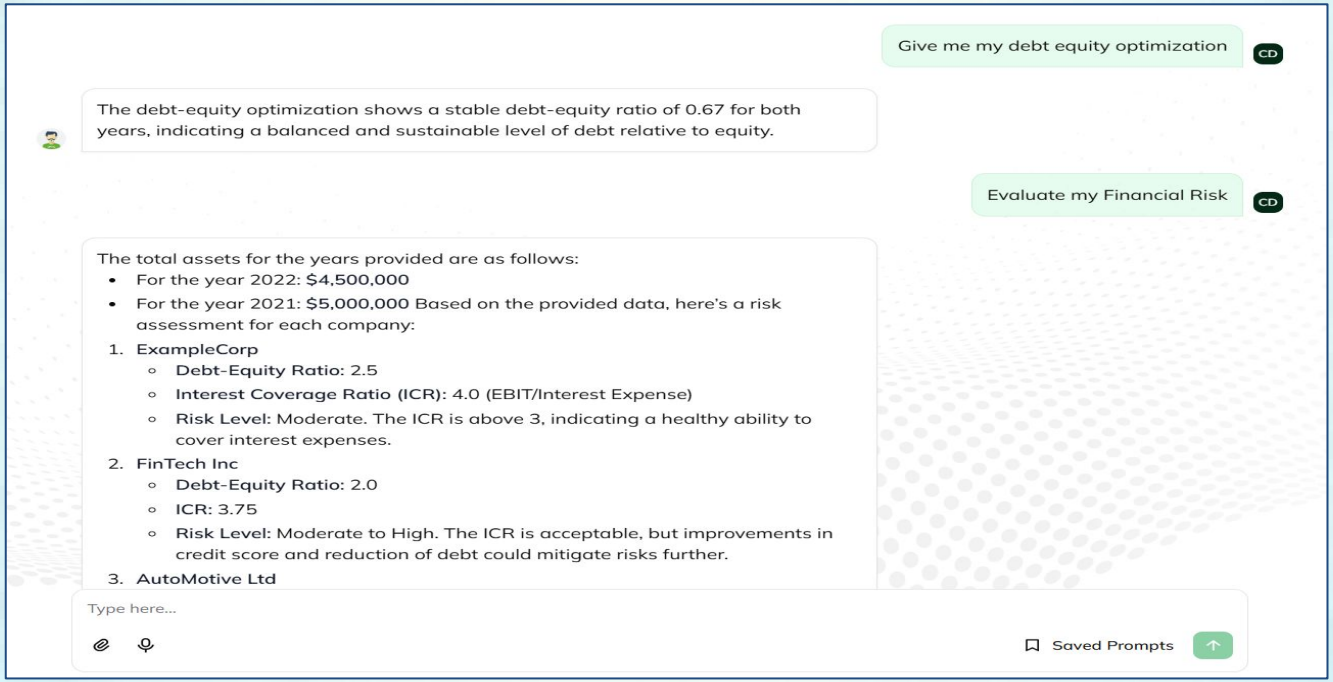
The Social Media Analysis:
Credibility Evaluation for Instagram Profile: Apple

1. **Credibility Score:** 10/10
2. **Decision:** Excellent credibility for investment talks.
3. **Reasoning:**
   - Strengths:
     - **High Engagement:** Apple's Instagram profile boasts millions of followers and consistently high engagement rates on posts, indicating a strong connection with its audience.
     - **Professional Presence:** The profile is well-curated, showcasing high-quality visuals and content that reflect the brand's identity and values.
     - **Verification:** The account is verified, which adds a layer of authenticity and trustworthiness to the profile.
     - **Content Relevance:** Posts are relevant to the tech industry, featuring product launches, updates, and innovations that are of interest to investors and consumers alike.
   - Weaknesses:
     - **None Identified:** The profile does not exhibit any significant weaknesses that would detract from its credibility. There are no signs of low engagement or bot-like activity, and the content is consistently professional and relevant.

Overall, the Apple Instagram profile demonstrates exceptional credibility and is highly suitable for investment discussions.



Additional Startup Side Features



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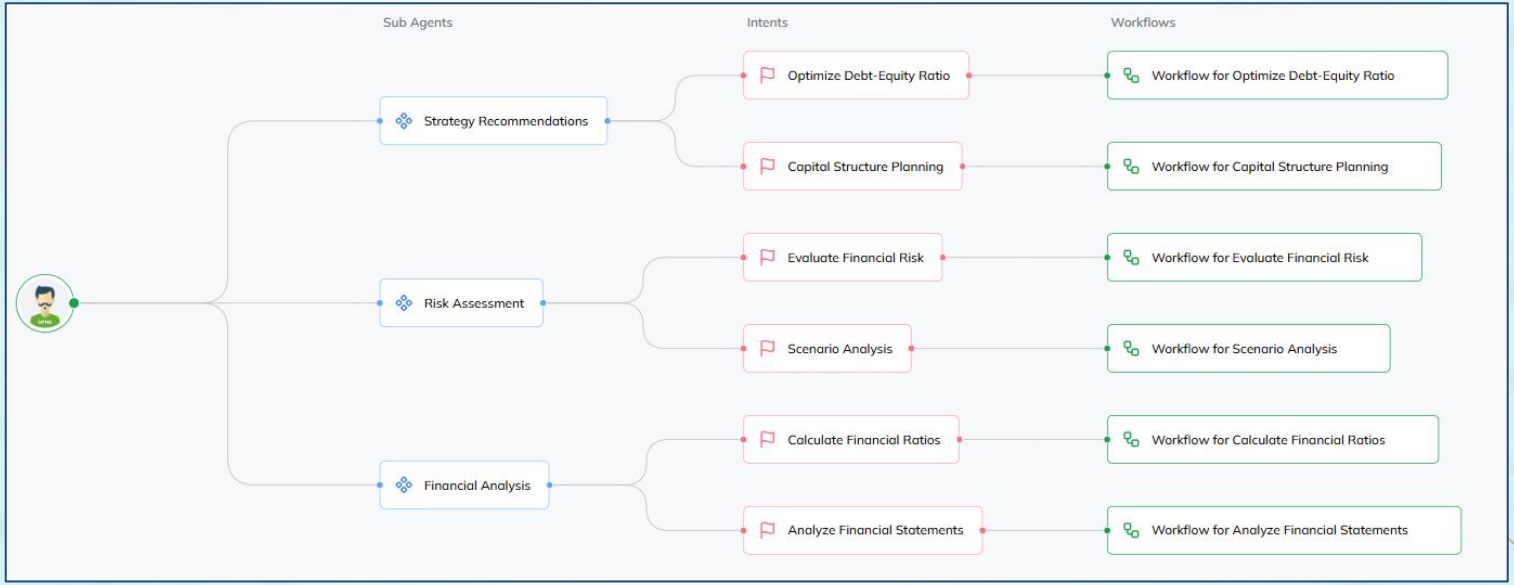

Business Model

Key partners: Startups and Investors

Business Idea:

1. Startups and Investors can pay 1 percent of investment as brokerage amount for connecting the startups and Investors
2. Premium membership to get early access of investors to startups or vice versa
3. Charges for additional Agent Features of scheduling quick meetings between startups and investors

How Mentoring Helped

1. Crafted Business Model
2. Integrated Matchmaking of Startup
3. Added ReadMe File
4. Implemented RAG
5. Used WebCrawler for analysing online presence of investors
6. Used Tables for storing and accessing data