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Digital Nurture
Techno verse
2024

Hackathon Idea :
Domain: Financial Technology
Use case: Fraud Detection

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Ideation Submission - Team Information

Team - **VARN**
College - **Indian Institute of Information Technology Guwahati (IIITG)**

Team Name	Team Member Name	Mail ID	Department	Year of passing
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FUND SPY : an inventive analytical solution to mitigate and investigate financial frauds. | Business Plan (1/2)

WHY
Explain the Problem

Problem Description & Business Scenario: One of the largest economic offense in India is that of banking fraud which has grown substantially and as per RBI, INR1.85Lakh Crore bank frauds were reported in 2019–20.As the financial industry experiences a surge in digital transactions.

Problem Scope : Specialize in detecting anomalies and suspicious activities within financial fund trails, using advanced algorithms to analyze transaction data for potential risks or fraudulent behaviors. It will operate within the client's provided data ensuring privacy and security.

Target User/Stake Holders: Financial institutions, including investment firms, banks, corporations, and businesses.

HOW
Explain the Solve

Solution Overview: FUND SPY: A Machine Learning and Blockchain based fund trail analysis tool that provides detailed reports.

Technical Details: 1. Deep Learning Models - LSTM and NLP models - BERT and Llama.

2. Python and Pyplot for graphical analysis- Network Density, Degree Sequence, and Strength Sequence to provide comprehensive insights.

3. Blockchain infrastructure - leveraging BigChainDB for robust and immutable data storage.

4. Key Libraries : BigchainDB Python driver, BigchainDB Websocket API, MongoDB Connector for Business Intelligence (BI), and BigchainDB Query Language (BQL)

Innovation : 1. Real-time suspicion alert system coupled with blockchain-based privacy options.

2. Promptly flag firms for investigation based on suspicious activities

Market Appeal : 1. Promises significant reductions in costs (30-40%) and time (50-60%) for financial institutions.

2. Adaptable to both small and large financial entities, scalable via AWS Cloud Services.

3. Easily integrates with existing financial systems and regulatory frameworks, increasing its utility and adoption rate.

Appeal in Technology: 1. ML: Capture long term dependencies through LSTM's and nuanced analysis by Models like BERT OR GPT.

2. BigChainDb - our immutable ledger which is provides high scalability, privacy and enhanced querying options.

WHAT
Value proposition

User Experience:
- Improved Clarity of up to 20-30% achieved by various client specific reports generated by fund analysis.
- Alerts and analysis for future fund trades.

Efficiency & Time Savings: Automated Analysis reducing effort and time by 50-60% and also increasing efficiency.

Cost Savings: Automation resulting in 30-40% cost saving .

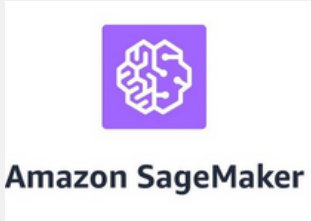**Flexibility & Scalability:** Use of AWS Cloud Services

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Financials & Timelines | Business Plan (2/2)

Investments

What does it take & How much does it cost to solve?

***All the costs have been mentioned for 1 FY and costs may vary on the scale of implementation

Cloud Infrastructure (AWS):
Rs. 60,000 - Rs. 1,50,000

AI and ML Tools:
Rs. 50,000 - Rs. 1,00,000

Data Acquisition:
Rs. 50,000 - Rs. 3,00,000

Blockchain Integration:
Rs. 50,000 - Rs. 1,50,000

Development Tools

Continuous Improvement:
Rs. 10,000 - Rs. 50,000

ROI
20-30% increase within the first year of implementation.

Revenue Growth
15-20% growth through optimized investment strategies.

Happy Customer
Improve customer satisfaction by 25% based on feedback and retention rates.

Margin Improvement
10-15% improvement through efficient risk management.

Employee Experience
Increase productivity by 20-30% due to automation of manual processes.

What if not solved ?
Inadequate detection Reliance on manual labor Extensive cleansing and normalization procedures

Returns

Quantify the benefits & What if I don't solve?

Timelines

Time to realize benefits

Time to solve

Initial Planning and Preparation (1-2 months)
Define project scope, objectives, and requirements; Conduct market research and feasibility analysis

Development and Implementation of Fund Spy (6-9 months):
Design and develop software; Integrate with AWS services and financial data sources.

Beta Testing and Feedback (1-2 months):
Gather feedback and identify any issues or areas for improvement; Iteratively refine and enhance.

Full Deployment and Launch (1 month):
Scale up infrastructure, final testing and validation; Prepare marketing and communication materials.

Milestones

Short-Term Benefits Realization (0-6 months after launch):
Improved Data Accessibility, Operational Efficiency, Initial ROI

Medium-Term Benefits Realization (6-12 months after launch):
Enhanced Decision-making, Risk Reduction, Increased Revenue

Long-Term Benefits Realization (12+ months after launch):
Significant ROI, Competitive Advantage, Continuous Improvement

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