

Ideation Phase

Brainstorm & Idea Prioritization

Date	23 October 2023
Team ID	Team-592449
Project Name	Project - Fake/Real Logo Detection using Deep learning
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization

Defining Project Goals and Scope:

Project Goal: The primary objective of this project is to create an AI system capable of detecting fake and real logos, thereby preventing fraudulent activities within the financial industry.

Scope: Initially, our focus will be on commonly used brand logos within the financial sector, with the aim of reducing logo fraud rates and establishing a robust logo validation system.

Data Collection and Preparation:

Data Sources: We will acquire logos and related data from a variety of sources, including financial institutions, publicly available data, and user submissions.

Dataset: We intend to assemble a diverse dataset comprising a minimum of 10,000 authentic logos and 5,000 counterfeit logos.

Data Preprocessing: To ensure data quality, we will standardize image formats, eliminate noise, and enhance image quality.

Image Recognition Model:

Model Selection: We will opt for an image matching approach for logo verification.

Training: The model will undergo supervised learning using the logo dataset to effectively distinguish genuine from counterfeit logos.

Feature Extraction:

Features: Various features, including color palettes, logo shape, typography, and unique logo elements, will be extracted from the logos.

Feature Vectors: Extracted features will be transformed into feature vectors for logo comparison.

Authentication and Verification:

Authentication System: The development of a web-based authentication system will facilitate companies in submitting logos for validation.

Verification Algorithm: We will implement a verification algorithm employing the trained model to validate the logos.

Real-time Logo Checks: The system will enable real-time checks for logos submitted by companies.

Real-time Monitoring and Alerts:

Monitoring: The system will continuously oversee logos employed in financial transactions and communications.

Alerts: Configurable alert mechanisms will notify relevant parties when suspicious logo activity is detected.

Thresholds: Different types of alerts, such as warnings and critical alerts, will be defined based on the nature of the detection.

User Authentication:

User Authentication: To protect sensitive data, a secure user authentication and authorization system will be implemented.

Continuous Learning:

Feedback Loops: Feedback mechanisms will be established to collect information for model enhancement.

User Feedback: Regularly gathering feedback from companies and users will contribute to the AI's accuracy improvement.

Model Updates: The model will be updated at regular intervals with new logo data and retrained as necessary.

User Interface (UI) and Reporting:

UI Design: A user-friendly web interface will be developed, allowing companies to interact seamlessly with the system.

Reports: The system will generate detailed reports and visualizations, presenting logo validation results, including real vs. fake statistics.

Testing and Validation:

Testing Scenarios: Comprehensive testing, encompassing real-world and simulated scenarios, will be conducted.

Accuracy Metrics: System performance will be assessed using metrics such as accuracy, false positives, and false negatives.

Deployment and Scalability:

Cloud Deployment: The AI system will be deployed in a scalable cloud-based environment to ensure flexibility and accessibility.

Scalability Plan: A plan for infrastructure scaling will be developed to accommodate a growing user base.


Feedback Loop for Improvement:

Feedback Mechanisms: Various feedback channels will be established to collect input from companies, users, and stakeholders.

Continuous Improvement: The collected feedback will be utilized to drive continuous improvements in both the AI model and the overall system.

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Template



Brainstorm & idea prioritization

In our quest to create a robust AI system for detecting fake and real logos in the financial industry, brainstorming and idea prioritization are essential. This phase aims to generate innovative solutions and select the most promising ones. We'll gather diverse perspectives and expertise to address the problem effectively.

4 People



Need some inspiration?
See a finished version of this template to kickstart your ideas.

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Before you collaborate

A

Team gathering
Our team comprises four members, and we collectively manage all aspects of the project, encompassing front-end development, artificial intelligence, and integration. Each team member possesses a thorough understanding of the project's objectives, ensuring a cohesive and efficient workflow.

B

Set the goal
All our ideas were noted and implemented by setting goals to each other and prioritizing the most viable concepts for implementation of our AI model.

C

Learn how to use the facilitation tools
We have acquired proficiency in utilizing facilitation tools, which are indispensable for the facilitation of productive brainstorming and idea prioritization sessions. Our mastery of techniques such as agenda establishment, active listening, and prioritization methods has been instrumental in orchestrating a well-structured and triumphant collaborative process, ultimately resulting in the development of a potent artificial intelligence solution.

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Define your problem statement
The problem statement revolves around the development of an AI system that can discern genuine from counterfeit logos, initially within the financial sector. This challenge arises due to the need to combat fraudulent logo usage, reduce logo fraud rates, and fortify the validation process within the financial industry. The problem statement establishes the project's objective to create a robust logo detection system tailored to various sectors.

PROBLEM

Lacking in protection of Consumer Protection ,Brand Integrity

Key rules of brainstorming

To run a smooth and productive session

Stay on topic.

Defer judgment.

Quantity Over Quality

Encourage wild ideas.

Listen to others.

If possible, be visual.

Stay on topic - We made sure that the discussion focused on the specific problem or objective of the session which ensures that the brainstorming remains relevant and productive.

Defer Judgment: We encouraged our team to suspend judgment and criticism during the brainstorming session. All ideas were welcomed without evaluation. This created us a safe space for us to share freely.

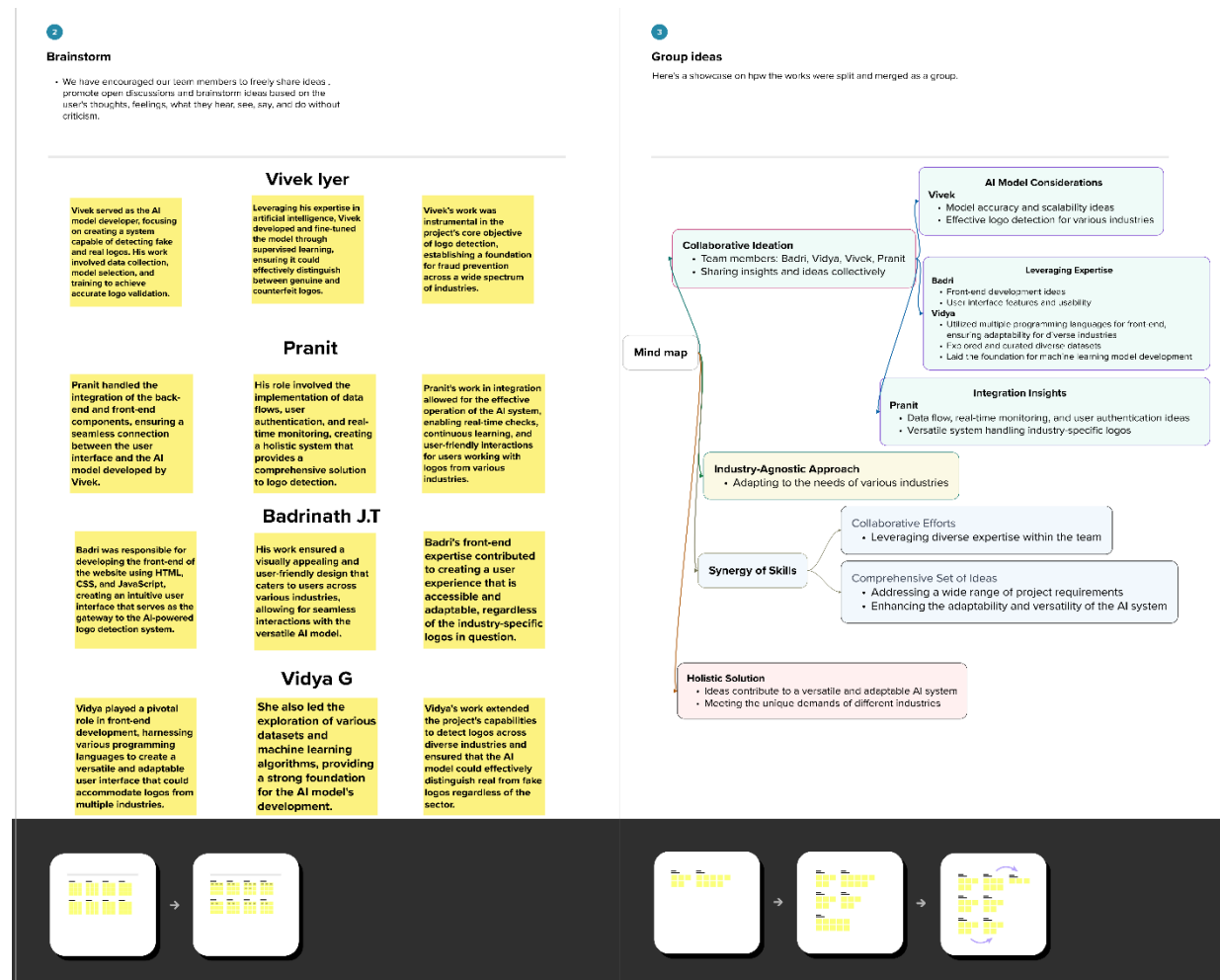
Quantity Over Quality: Focusing on generating a large quantity of ideas lead us to diversity and creativity in brainstorming.

Encourage Wild Ideas: We welcome and appreciate unconventional or "wild" ideas. Sometimes, the most innovative solutions come from thinking beyond traditional boundaries.

If Possible, Be Visual: We used visual aids, sketches, diagrams, mind maps to represent ideas. Visualizations can make complex concepts more understandable and can spark new insights.

Listen to Others: Actively listening and noting the ideas and contributions of other participants not only respects their input but also allows for cross-pollination of ideas.

Step-2: Brainstorm, Idea Listing and Grouping



THANK YOU!

A project done by Team-592449

MEET OUR TEAM

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PRANITI ➡ INTEGRATION

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