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Object Detection using Salesforce

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Abstract: ***Our Project deals with integrating an object detection API with Salesforce, it is a popular customer relationship management (CRM) platform.***
Object detection APIs can help automate tasks, extract data from images, and enhance the customer experience, which can lead to increased productivity, improved analysis.
The integration process involves choosing an object detection API, obtaining necessary credentials, determining how to use the API within Salesforce, connecting to the API using Salesforce APIs, implementing code to handle API response, and thoroughly testing the integration.
By Integrating object detection APIs into Salesforce, organizations can improve their ability to analyse and leverage image data, leading to better business outcomes and improve customer satisfaction.
Keywords: Tensor Flow, Salesforce Org, API Integration – Postman.

I. INTRODUCTION

Object detection is a computer vision technique that allows machines to identify and locate specific objects within an image or video.

It has numerous applications across various industries, including healthcare, manufacturing, retail, and more. Salesforce, a leading provider of customer relationship management (CRM) software, has integrated object detection capabilities into its platform, enabling businesses to leverage this technology to improve their customer experience and streamline their operations.

Salesforce's object detection capabilities are powered by its Einstein Vision technology, which uses deep learning algorithms to analyze images and identify specific objects within them.

This technology can be used to automatically tag and categorize images, as well as to identify patterns and trends within large datasets. With object detection in Salesforce, businesses can automate tasks such as product recognition, inventory management, and quality control.

This technology can also be used to improve customer engagement by enabling businesses to personalize their marketing campaigns based on customer preferences and behaviors.

Overall, object detection in Salesforce provides businesses with a powerful tool for improving efficiency, enhancing customer experience, and gaining valuable insights into their operations.

II. OBJECTIVE

An Object Detection Using Salesforce is to improve sales and marketing teams and identify and track customer needs. This information can be used to develop targeted marketing campaigns and personalized sales strategies.

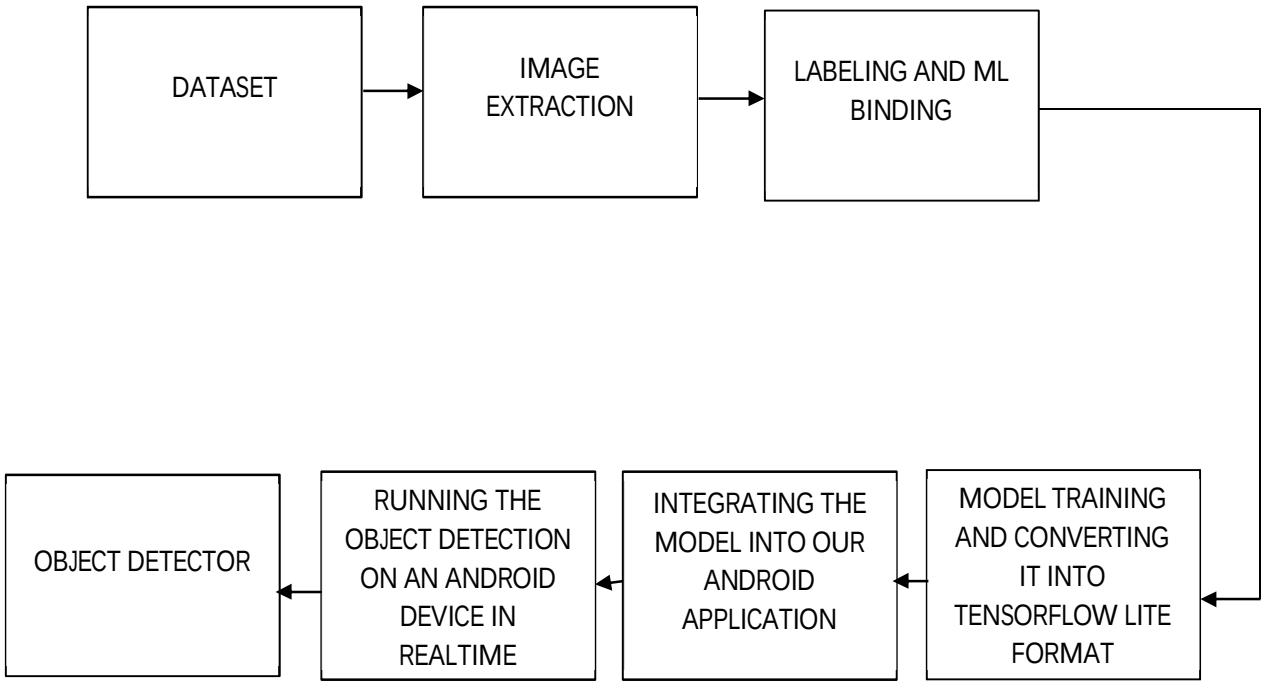
III. LITERATURE REVIEW

1) “Object Detection and Recognition with Salesforce Einstein Vision” by Kiran Kumar.
2) “Salesforce Einstein Object Detection” by Anil Kumar.
3) "Object Detection in Salesforce using the Amazon Recognition Service" by Kishore Kumar.
4) “Salesforce Integration” by blogs.emorphis .
5) “A Review on Salesforce Integration” by Lavanya Yallanki

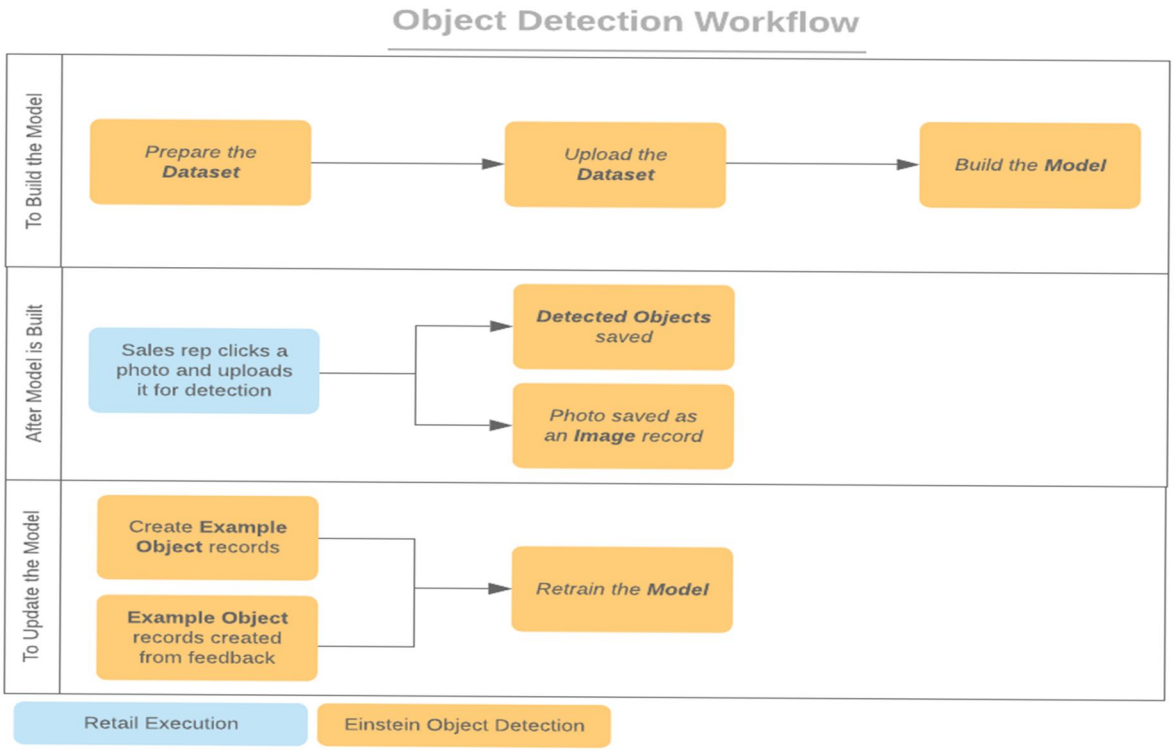
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IV. EXISTING SYSTEM

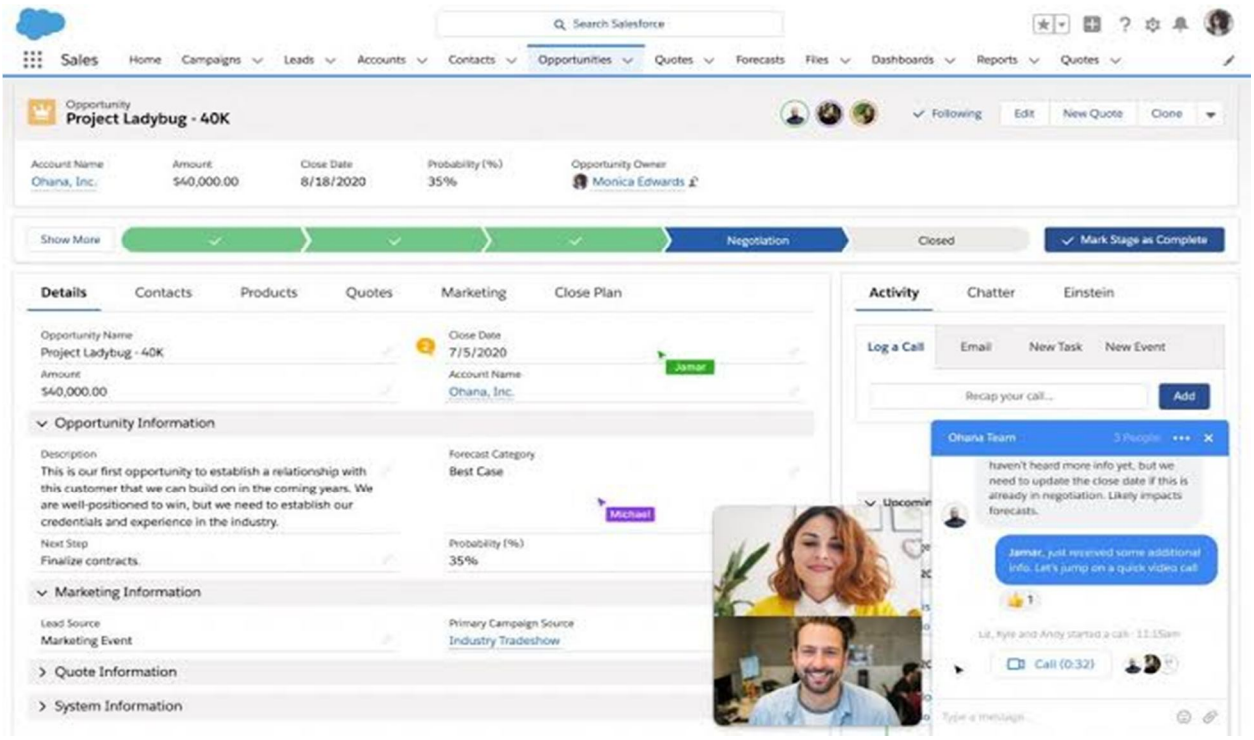


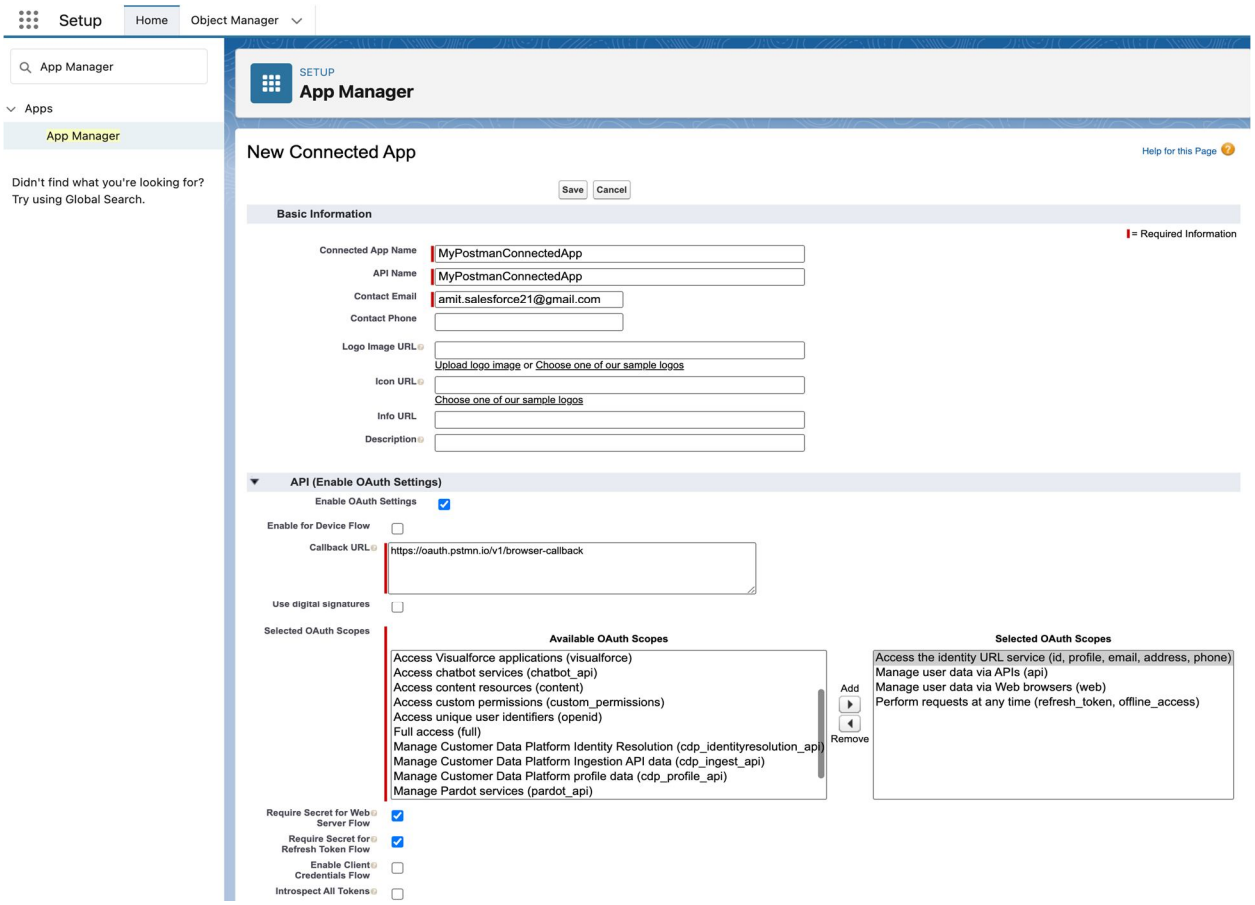
V. PROPOSED SYSTEM



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VI. MODULES


Search Salesforce
Sales
Home
Campaigns
Leads
Accounts
Contacts
Opportunities
Quotes
Forecasts
Files
Dashboards
Reports
Quotes
Opportunity
Project Ladybug - 40K
Following
Edit
New Quote
Clone
Account Name
Ohana, Inc.
Amount
$40,000.00
Close Date
8/18/2020
Probability (%)
35%
Opportunity Owner
Monica Edwards
Show More
Negotiation
Closed
Mark Stage as Complete
Details
Contacts
Products
Quotes
Marketing
Close Plan
Opportunity Name
Project Ladybug - 40K
Close Date
7/5/2020
Amount
$40,000.00
Account Name
Ohana, Inc.
Opportunity Information
Description
This is our first opportunity to establish a relationship with this customer that we can build on in the coming years. We are well-positioned to win, but we need to establish our credentials and experience in the industry.
Forecast Category
Best Case
Next Step
Finalize contracts.
Probability (%)
35%
Marketing Information
Lead Source
Marketing Event
Primary Campaign Source
Industry Tradeshow
Quote Information
System Information
Activity
Chatter
Einstein
Log a Call
Email
New Task
New Event
Recap your call...
Add
Ohana Team
haven't heard more info yet, but we need to update the close date if this is already in negotiation. Likely impacts forecasts.
Jamar, just received some additional info. Let's jump on a quick video call
Call (0:32)
Type a message...

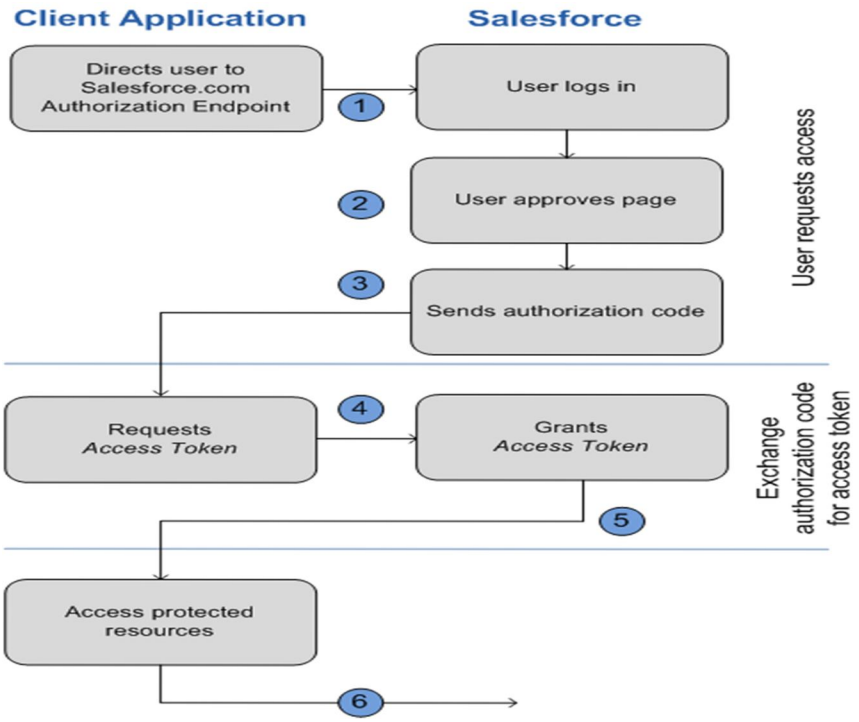

Setup
Home
Object Manager
App Manager
Apps
App Manager
Didn't find what you're looking for?
Try using Global Search.
SETUP
App Manager
New Connected App
Help for this Page
Save
Cancel
Basic Information
= Required Information
Connected App Name
MyPostmanConnectedApp
API Name
MyPostmanConnectedApp
Contact Email
amit.salesforce21@gmail.com
Contact Phone
Logo Image URL
Upload logo image or Choose one of our sample logos
Icon URL
Choose one of our sample logos
Info URL
Description
API (Enable OAuth Settings)
Enable OAuth Settings
Enable for Device Flow
Callback URL
https://oauth.pstmn.io/v1/browser-callback
Use digital signatures
Selected OAuth Scopes
Available OAuth Scopes
Access Visualforce applications (visualforce)
Access chatbot services (chatbot_api)
Access content resources (content)
Access custom permissions (custom_permissions)
Access unique user identifiers (openid)
Full access (full)
Manage Customer Data Platform Identity Resolution (cdp_identityresolution_api)
Manage Customer Data Platform Ingestion API data (cdp_ingest_api)
Manage Customer Data Platform profile data (cdp_profile_api)
Manage Pardot services (pardot_api)
Add
Remove
Selected OAuth Scopes
Access the identity URL service (id, profile, email, address, phone)
Manage user data via APIs (api)
Manage user data via Web browsers (web)
Perform requests at any time (refresh_token, offline_access)
Require Secret for Web Server Flow
Require Secret for Refresh Token Flow
Enable Client Credentials Flow
Introspect All Tokens

VII. TEST SALESFORCE API USING POSTMAN

Postman is an API collaboration platform used for APIs. Postman is an application used for API testing. It is an HTTP client that tests HTTP requests, utilizing a graphical user interface, through which we obtain different types of responses that need to be subsequently validated.

A. Steps

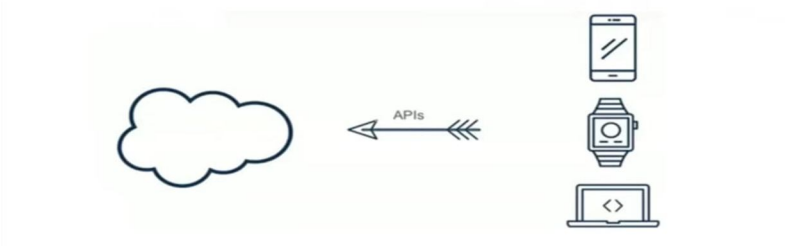
1) Create a connected app for oauth.
2) Setup Postman
3) Get Access in Postman
4) Setup Variable for Postman Project
5) Test API using Postman



Operating System: Windows 10
Tools: TENSOR FLOW used for Object Detection
POSTMAN used for API Collaboration Platform
SALESFORCE CRM

IX. INTEGRATION

Salesforce Integration is the process of connecting Salesforce.com to other 3rd party external systems and applications like Facebook, LinkedIn, Gmail, Outlook and external websites. The Salesforce API is as vast as deep blue sea because it uses an API-first approach for building features on the Salesforce Platform. This approach provides the flexibility to mold the data in whatever format required.



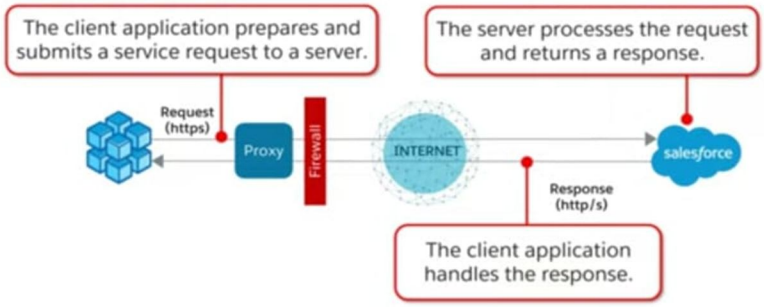
Types of Salesforce Integration:

- Real-Time Integration
- App Exchange
- Real-Time Mashups

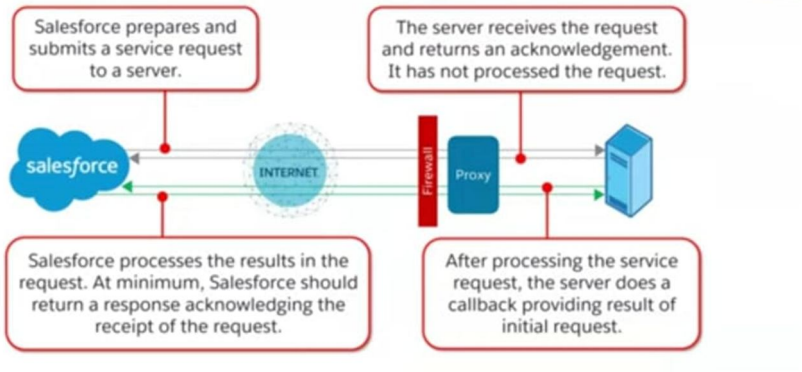
X. INTEGRTAION CLASSIFICATION

A. *Inbound Integration*

Dotnet, Java or PHP code to interact with Salesforce.



B. *Outbound Integration*



XI. AUTHENTICATION:

A. *User Authentication*

1) Username / Password
2) Password never expires for API User
3) Profile Based Restrictions
4) API only user
5) Limits on number of failed attempts

a) Authorization – Oauth 2.0
b) Data Security
c) Network Authentication
  (i) Login Hours and IP ranges
  (ii) Org-wide trusted IP ranges
  (iii) Security Token for login via API
d) Make sure the profile of the integration user meets the needs.

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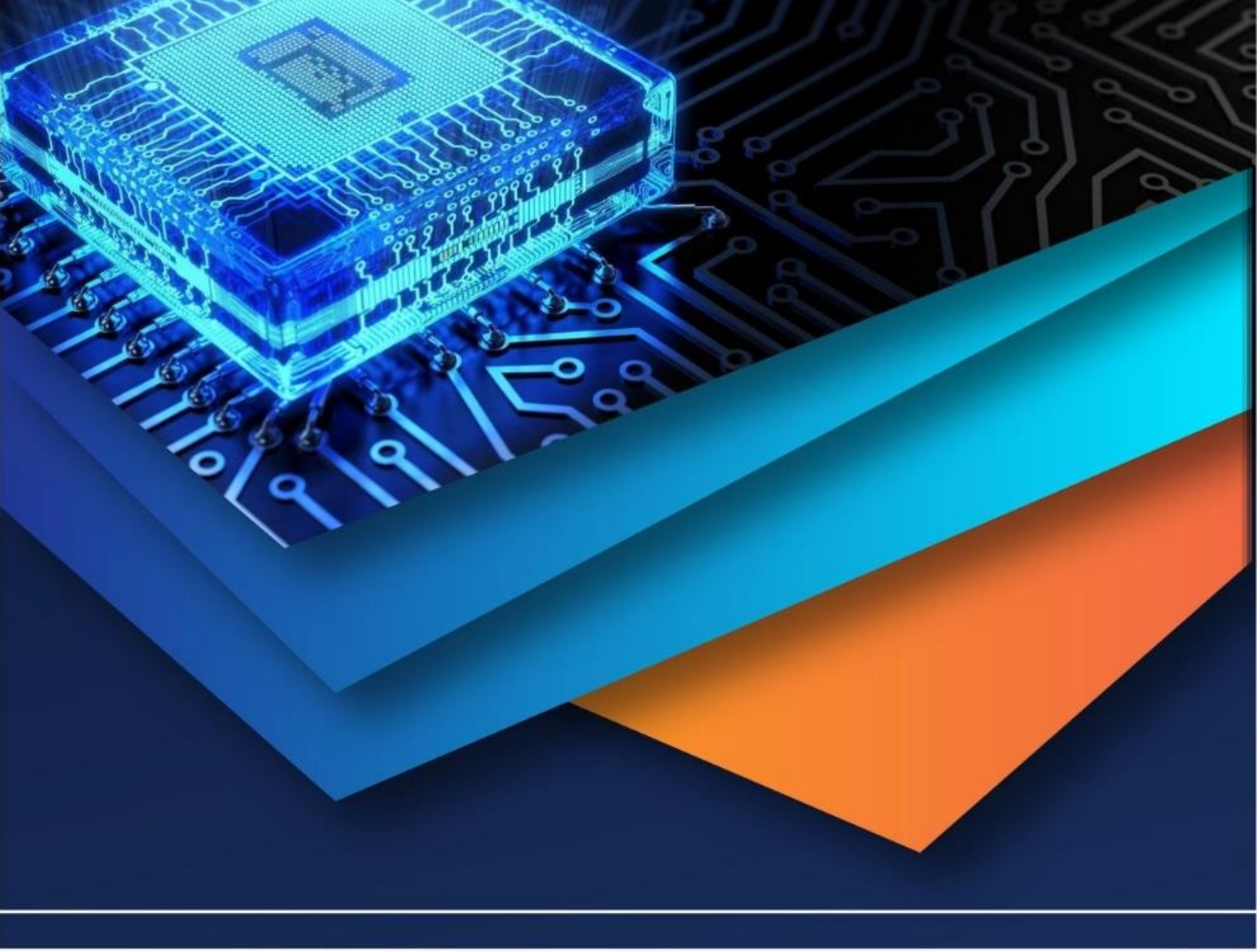
XII. CONCLUSION

Salesforce's object detection capabilities can be applied in various industries, such as retail, manufacturing, and healthcare, to improve operational efficiency, enhance customer experiences, and automate processes.Salesforce's object detection capabilities offer a powerful tool for businesses looking to harness the power of AI to improve their operations and gain a competitive advantage in the marketplace.

Overall, Salesforce API integration offers a powerful tool for businesses to connect Salesforce with other systems and streamline their operations. By leveraging Salesforce APIs, businesses can improve productivity, reduce manual work, and gain a competitive advantage in the marketplace.

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[3] Connecting Image Recognition Technologies to the Salesforce Ecosystem with CT Vision. https://customertimes.com/insights/connecting-image-recognition-technlogies-to-the-salesforce-ecosystem-with-ct-vision/
[4] Test SALESFORCE API USING POSTMAN https://www.apexhours.com/test-salesforce-rest-api-using-postman/
[5] For third-party object detection APIs, you can refer to the documentation and developer guides provided by the respective providers:
Amazon Recognition: https://aws.amazon.com/rekognition/
Google Cloud Vision: https://cloud.google.com/vision
Microsoft Azure Computer Vision:
https://azure.microsoft.com/en-us/services/cognitive-services/computer-vision/



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