Urdu Hindi Bootcamp 2021

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PAKISTAN
USER GROUP

Build COVID Safe solutions with AI Builder

خوش آمدید WELCOME स्वागत हे

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HELLO!

I am Arafat Tehsin

Microsoft MVP – AI

Solution Architect – EY

@arafattehsin github.com/arafattehsin

arafattehsin.com/blog

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AGENDA

- Why AI and Why now?
- Microsoft AI Landscape
- AI Builder
- Custom Models
- Object Detection
- Covid Safe Solution

https://www.gartner.com/doc/reprints?id=1-25C36W9W&ct=210226&st=sb

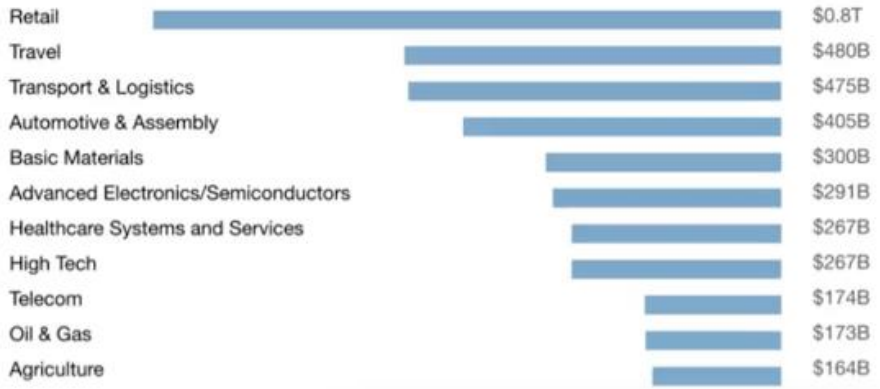
It's not enough just to sort of have AI capability that we can exercise — you also need the ability to democratize it so that every business can truly benefit from it.

- Satya Nadella

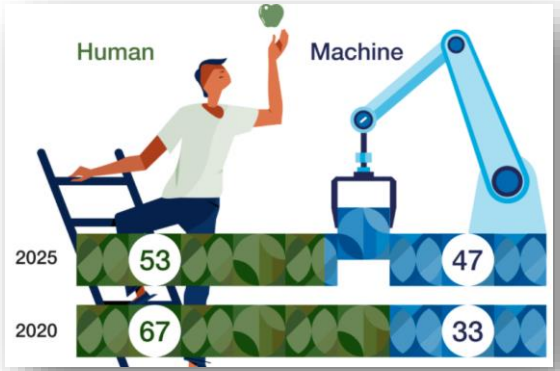
PROJECTION OF AI

AI value creation by 2030

$13 trillion



Rate of Automation



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https://www.gartner.com/smarterwithgartner/5-digital-technology-trends-for-2020/
Future of Jobs Report 2020, World Economic Forum

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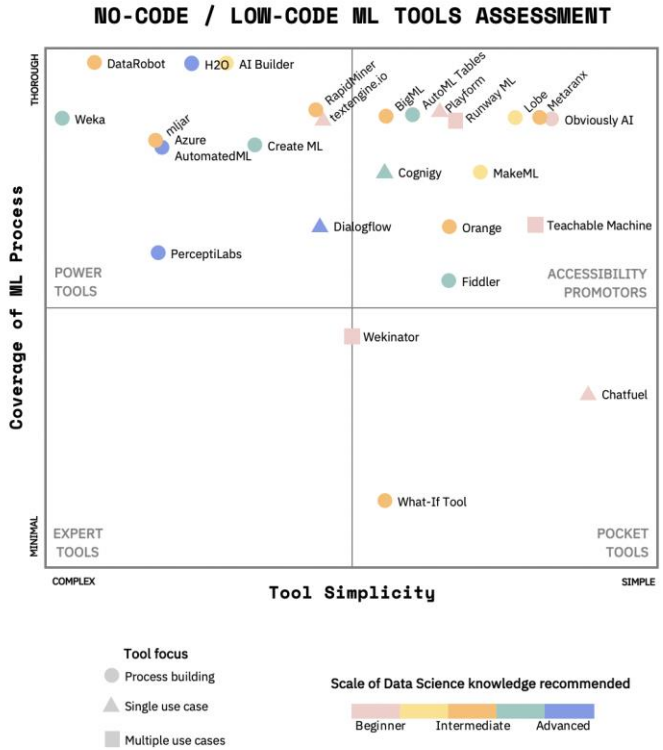
CLOUD AI DEVELOPER LEADERS

Figure 1: Magic Quadrant for Cloud AI Developer Services

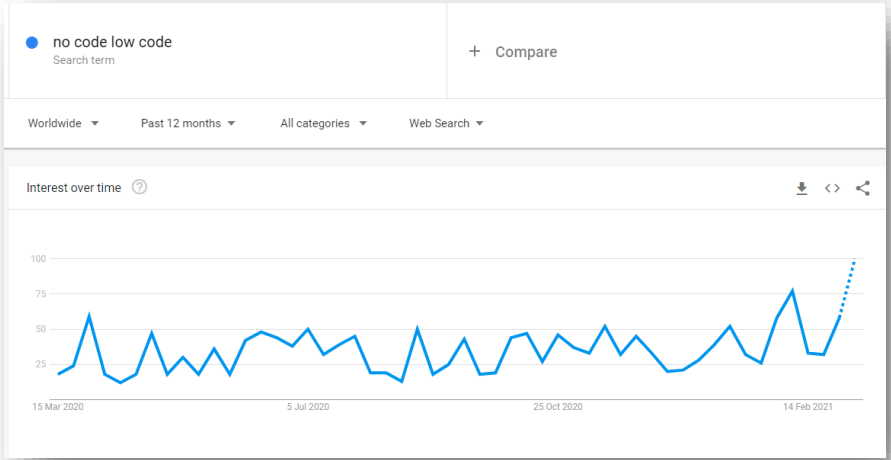
Source: Gartner (February 2021)

https://www.gartner.com/doc/reprints?id=1-25C36W9W&ct=210226&st=sb

NO-CODE / LOW-CODE AI LANDSCAPE



By 2023, over 50% of medium to large enterprises will have adopted an LCAP as one of their strategic application platforms.



https://www.gartner.com/en/documents/3991199
https://medium.com/aixdesign/26-no-code-low-code-ml-tools-to-check-out-8b3414eaa489

MICROSOFT AI STACK

	Azure ML	ML.NET	Cognitive Services	Lobe	AI Builder	WinML
Create & Train Custom Models	Yes	Yes	Yes	Yes (Preview)	Yes	No
Model Cosumption	Web API, ONNX	API, TensorFlow, ONNX, ML.NET	API / SDK	API (Local) / ONNX / TensorFlow / Core ML etc.	Power Platform	ONNX
Level of ML knowledge	Intermediate to Beginner	Beginner	Beginner to not required	Not required	Not required	Not required

PRO CODE → LOW CODE → NO CODE

PowerApps

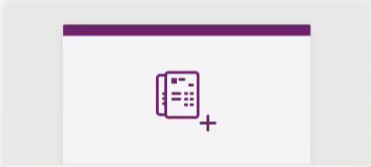
Search

- Home
- Learn
- Apps
- Create
- Data
- Business logic
- AI Builder
  - Build
  - Models
- Solutions

Enhance your business with AI

Add intelligence to your business. Create tailored AI models to automate processes and find insights. Learn more

Make your own AI model

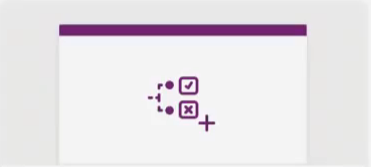


Form Processing

Automatically handle routine documents, like invoices or tax forms.

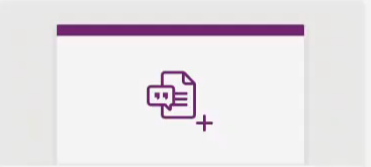
Object Detection

Count and label things in images.



Prediction

Predict whether something will happen.

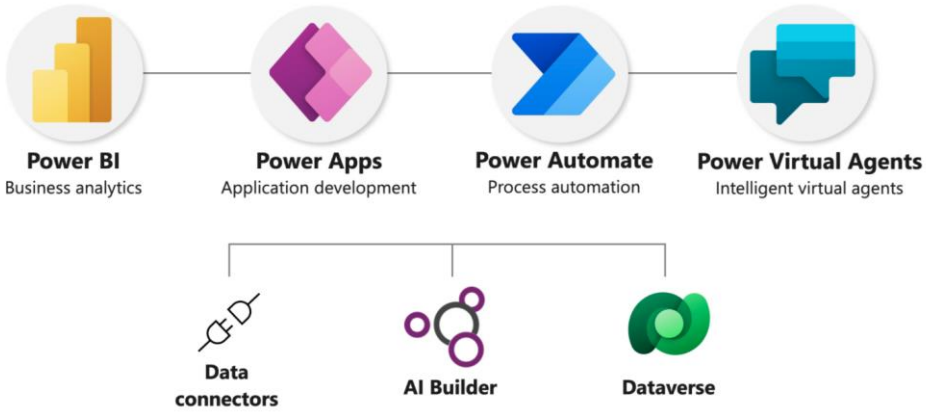


Text Classification

Analyze the meaning of text, like reviews or feedback.

AI BUILDER

- A low-code AI capability that spans the Microsoft Power Platform, Dynamics 365, and Office 365
- AI for every app and for everyone
- Innovation anywhere Unlocks value everywhere



PRE-BUILT MODELS

Business Card Reader

Automatically process business card information

Text Translation

Translate text into the new language automatically

Key Phrase extraction

Extract the key talking points from the text

Entity Extraction

Extract entities and their types from the text

Language Detection

Identify the language being used in text

Category classification (Preview)

Categorize text by its meaning so it's easier to analyze

Sentiment Analysis

Analyze positive / negative sentiment in a text

Receipt Processing

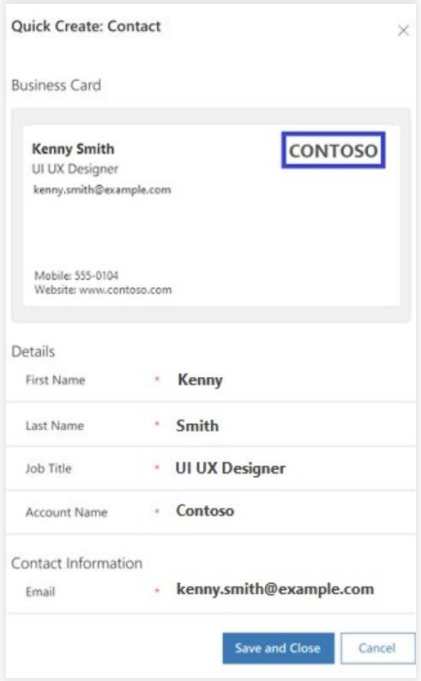
Read and save information from the receipts

Text Recognition (OCR)

Automatically process text from images

Identity Document Reader

Read and save information from the identity documents



CUSTOM MODELS

Object Detection

Recognize and count things in image

Prediction

Predict whether something will happen

Category Classification

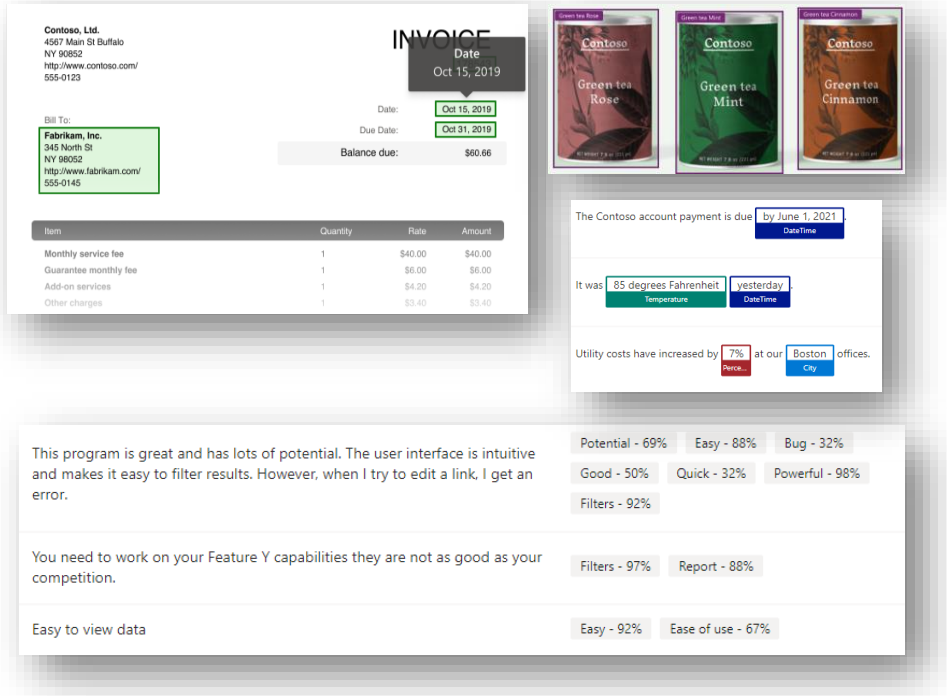
Categorize text by its meaning so it's easier to analyze

Entity Extraction

Recognize specific info about your business from data

Form Processing

Read and save info from standard documents



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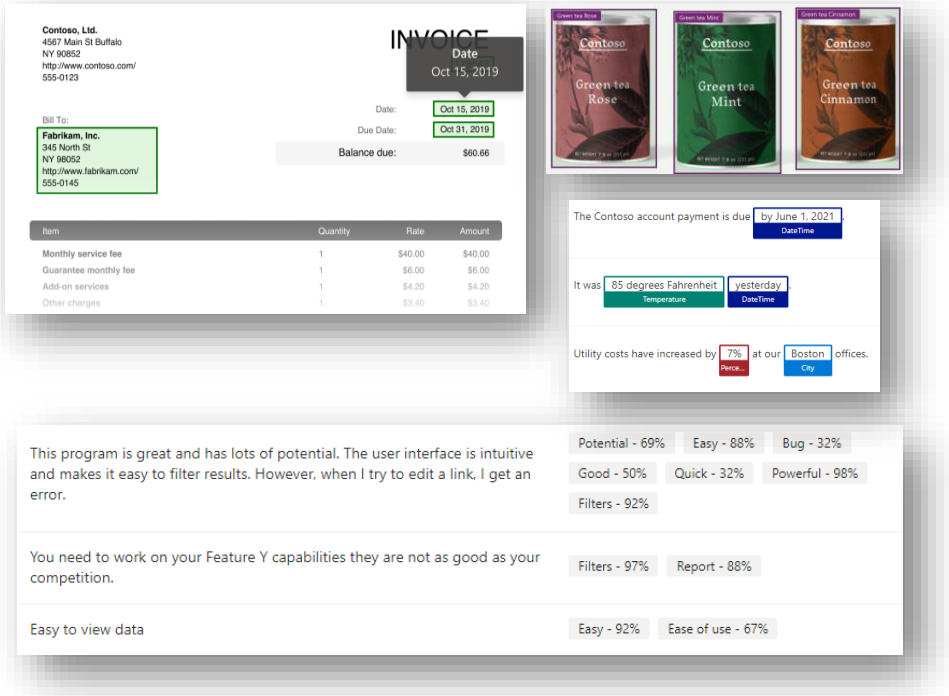
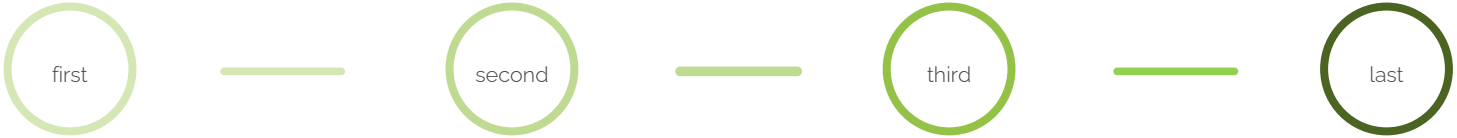
OBJECT DETECTION

- Custom model needs training
- Azure Custom Vision is used behind the scenes
- Same number of images for each object
- Images can be in JPG, BMP, PNG or from Power Apps picker / camera control
- *People (Object) Counting*
- *Brand logo recognition*
- *Object recognition for Field Service technician*



CUSTOM MODEL PROCESS



Data Preparation

Train on Data

Select your historical outcome, train & filter your data

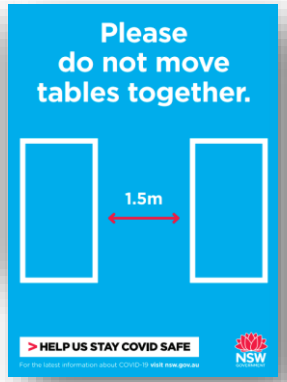
Create & Publish

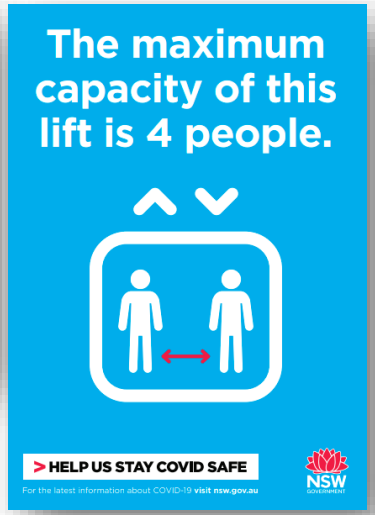
Predictions can also be achieved on runtime, now!

Continuous Evaluation

Keep monitoring the performance for better outcomes

LET'S SOLVE THIS PROBLEM





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CURRENT CHALLENGE

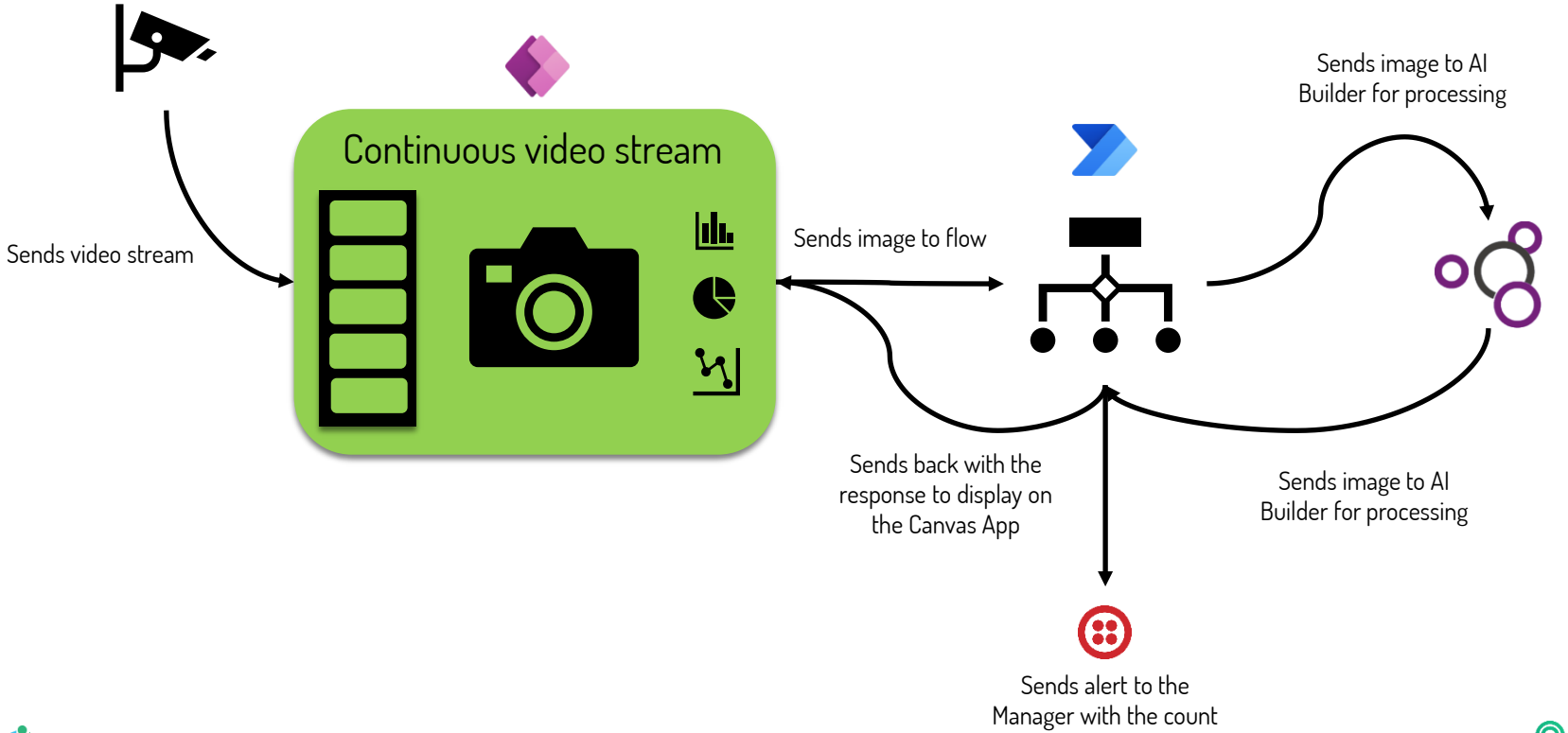
Manual Counting

Increasing Cost

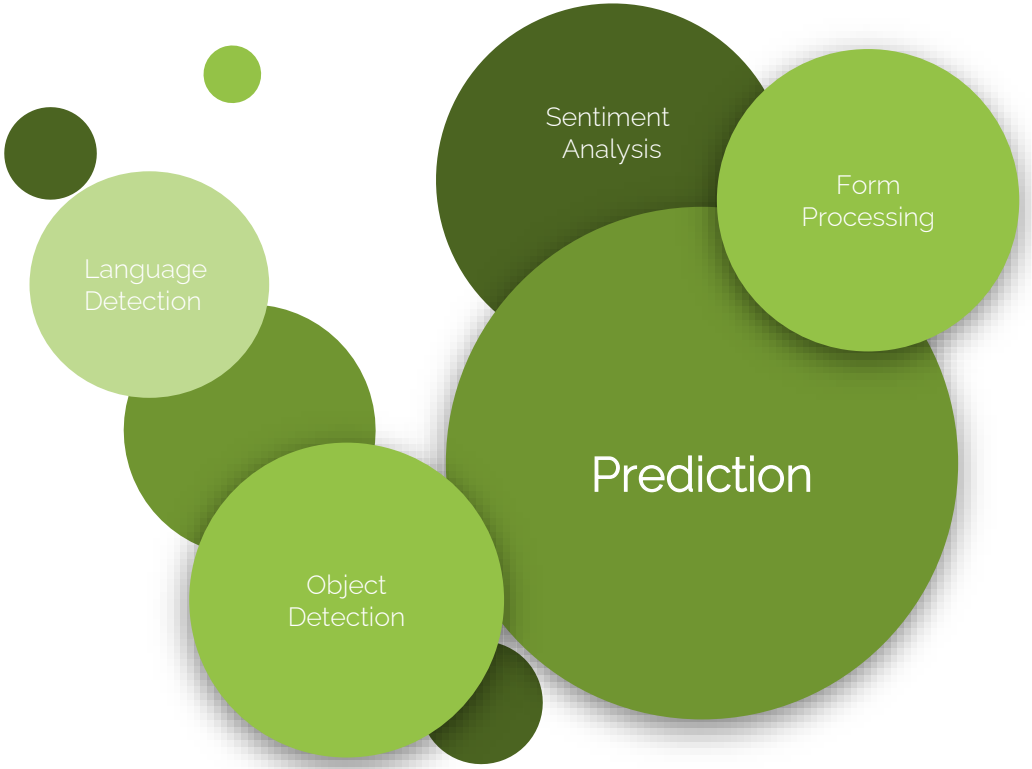
Staff overhead

Lack of operational efficiency

POWER PLATFORM TO THE RESCUE



Demo



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RESOURCES

- Learn AI Builder - What is AI Builder? - AI Builder | Microsoft Docs
- My Blog - https://www.arafattehsin.com/beginners-lets-build-covid-safe-solutions-with-ai-power-platform
- Demo - https://github.com/arafattehsin/CognitiveRocket/tree/master/AI-For-Every-Developer/Demos/ObjectDetectionAIBuilder

Any questions?

arafat@outlook.com

شکریه THANK YOU शुक्रिया

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