

# Srinivas Edala

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## Data Scientist, Gnyan (2023 – Present)

- Deliver Data Modernization Solutions, ETL Pipelines, Machine Learning Algorithms, Big Data Processing Engines, Artificial Intelligence Systems, MLOps Workflows, Computer Vision Capabilities, Natural Language Processing Modules, Neural Network Architectures, Evolutionary Programming Routines, and GenAI Agents
- Develop Cloud Ready IaaS, PaaS, SaaS, Serverless, Container, Infrastructure-as-Code Solutions

**Data**

## Product Manager, Elsevier (2003 – 2024)

- Lead Product Experience Designer for Elsevier Science Digital and Mobile Solutions.
- Conduct market research, user research, solution discovery, iterate A/B designs, engineer solutions, participate in GTM planning and release milestones.
- Benchmark omnichannel KPIs and manage continuous evolution iterations. Administer accessibility review board charter and compliance.

**Product**

## Innovator, Founder

- Founder of Data Consultancy  
<http://data-bloom.com>
- Founder of AI Consultancy  
<http://gnyan.ai>
- 2002 DAGSI Eminent Scholar
- Patent Grantee
- 30+ Publications
- Program Review, GTM Chair

*Recognition (Industry)*

## Solutions Professional

- PhD (incomplete), Wright State University, 2004
- Masters in Human Factors Engineering, Wright State University, 2002
- Masters in Computer Science, Andhra University, 1999

*Education (US)*

Python	R	AWS	Azure	GCP	Hadoop	Hive	Spark	Kafka	Flume	Sqoop	Flink	Hudi	EMR	Synapse
Snowflake	Databricks	Redshift	BigQuery	Looker	PowerBI	Qlik	Superset	Metabase	DBT	Airflow	Airbyte	Deequ	Great Exp	Alteryx
Nifi	Camel	Pandas	Polars	Storm	Datahub	Collibra	Alation	BigEye	Informatica	IaaS	PaaS	SaaS	Docker	IaC
Kubernetes	Terraform	AutoML	SageMaker	AutoML	AutoML	Jupyter	MLFlow	Git	Jenkins	Docker	IPC/RPC	TensorFlow	PyTorch	Keras
HuggingFace	OpenAI	GPT	Ollama	LangChain	Llamaindex	FastAI	LLaMA	Diffusers	Transformers	CNN	RNN	Clustering	Classification	Regression
Deep Learning	Gen AI	Forecasting	Anomaly Detection	Entity Recognition	Image Processing	Object Detection	Sentiment Analysis	Intent Mining	Translation	Dim Factorization	NLP	Computer Vision	NLP	Speech Processing
Neo4j	JanusGraph	GraphFrames	NetworkX	SentXformers	Embeddings	Quantization	Linear Programming	A/B leaderboards	Hyperparams	ONNX/PB	Artifactory	Balsamiq	Figma	Miro

*Skills Table (Data, ML, BD, AI, Gen AI, UX)*

# Building Science, Driving Outcomes

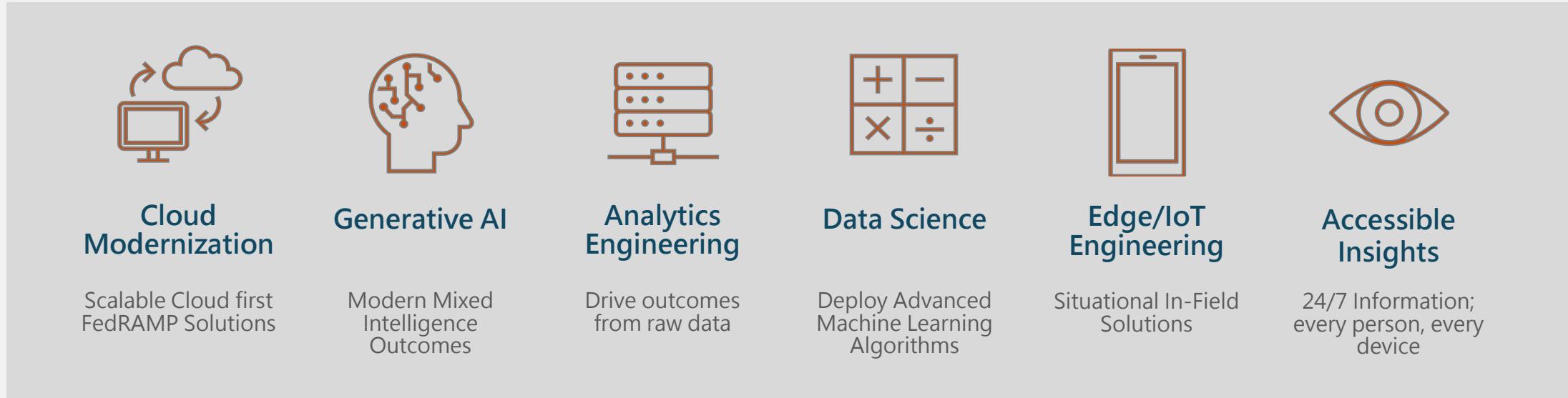
## AI Gold Rush

We sell shovels

<http://gnyan.ai>



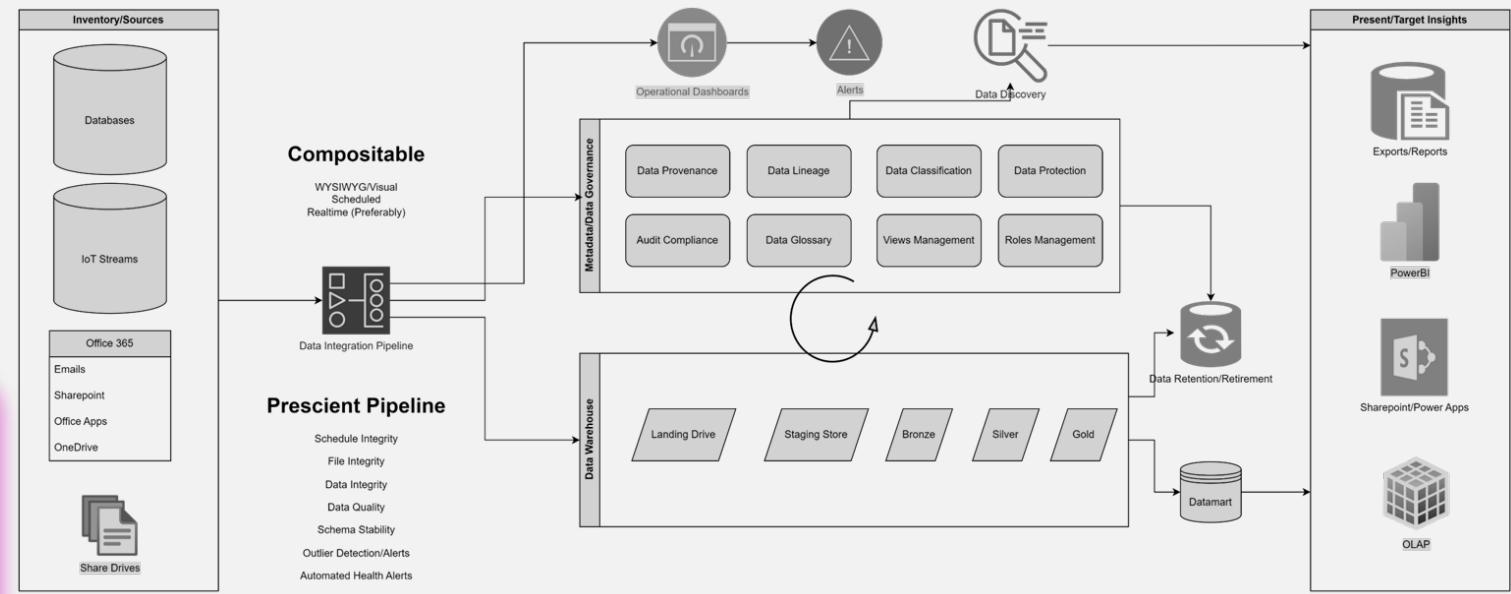
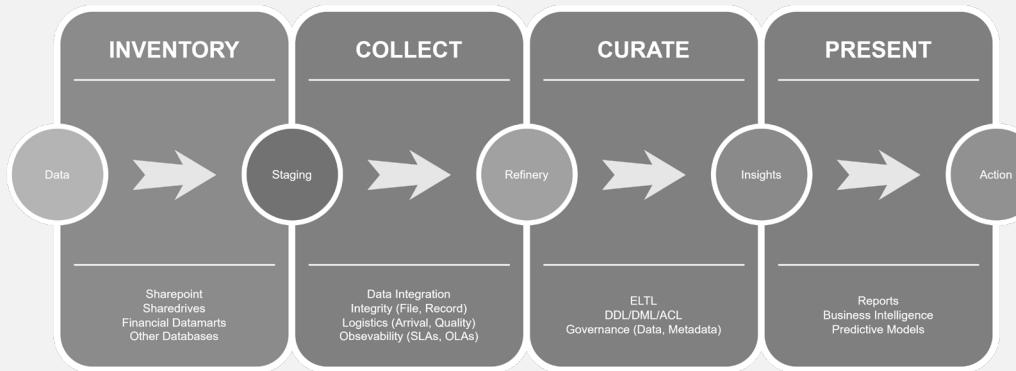
# Our Data Services (1 Pager)



# Addressing Data Platform, Tooling Challenges

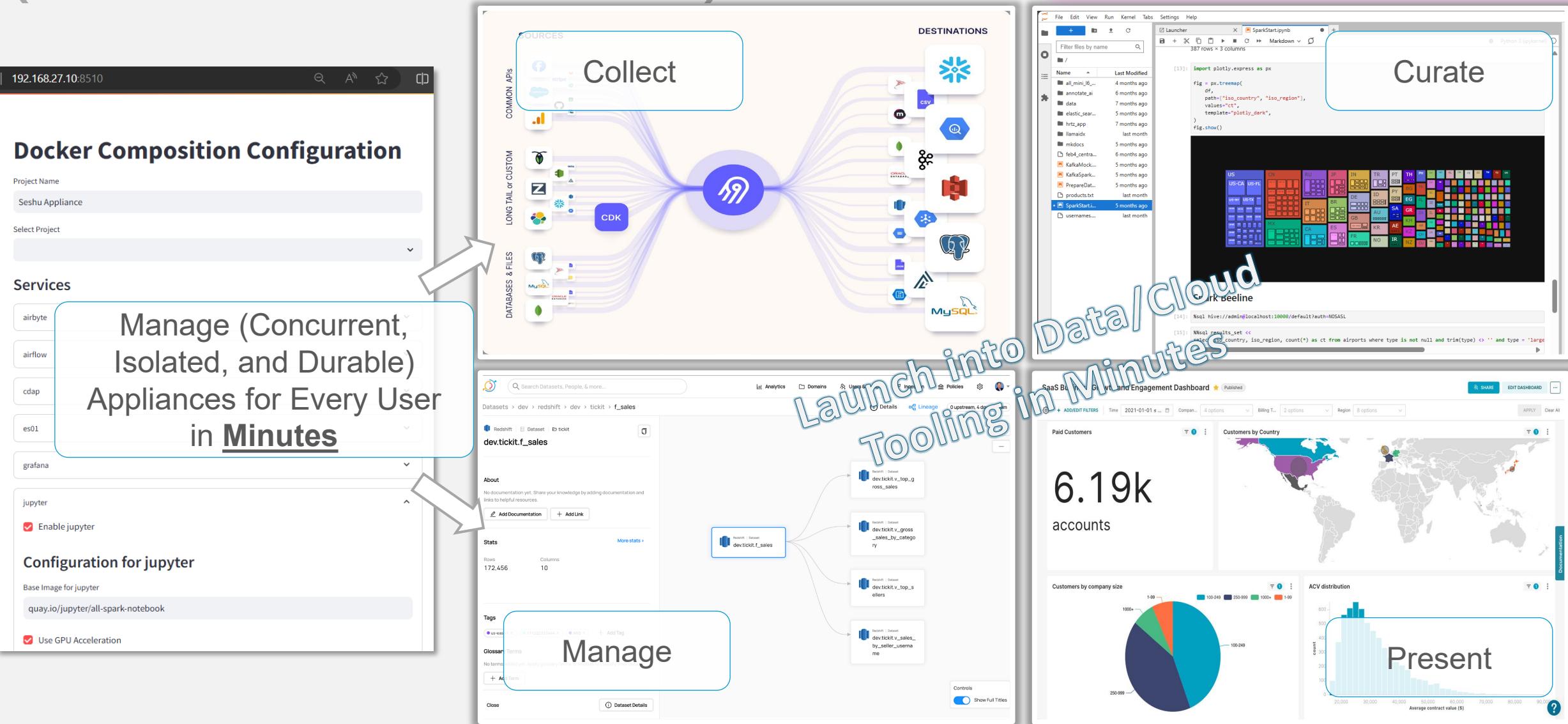
Integration  
Quality  
Exploration  
ETL Refinery  
  
Governance & Management  
Reporting  
Business Intelligence  
Data Science  
MLOps  
  
Data Marketplaces

Challenge: Do your data professionals have the right compute, ai, warehouse, devops tooling?



# Self-Service Analytics Appliance (Warehouse-on-the-Go)

# Demo: Whirr Analytics Infrastructure for Everyone in under 5 Minutes





MLOps Demo.zip

# From Data to Solutions (Rapid MLOps)

Continuous Artifactory

Auto Hyperparameter Tuning

A/B Champion Challenger Selection

Algo Selection

Scale Deployment

Visual DevOps Promotion

Catalyze Continuous Evolution with ML Leaderboards

# Descriptive & Prescriptive Modeling (ML)

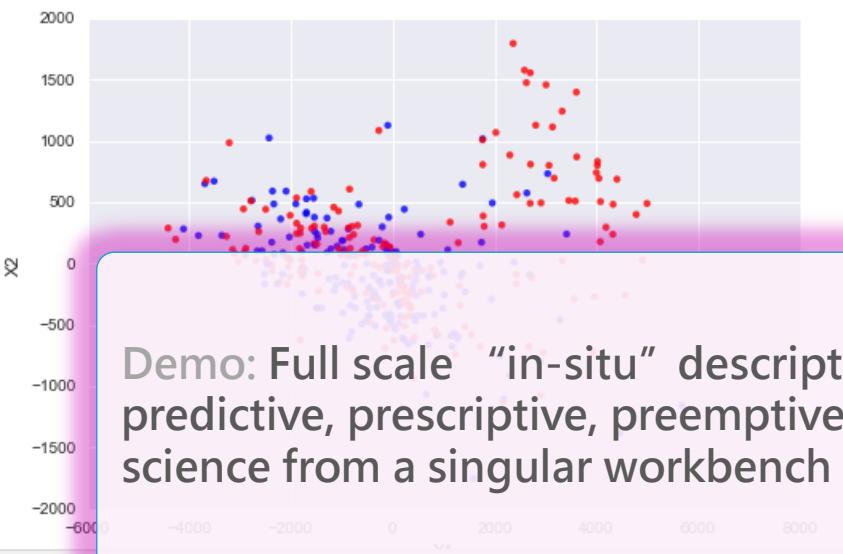
```
from sklearn.discriminant_analysis import LinearDiscriminantAnalysis
pca = PCA(n_components=2)
pipeline = Pipeline([('pca', pca)])
```

In [20]:

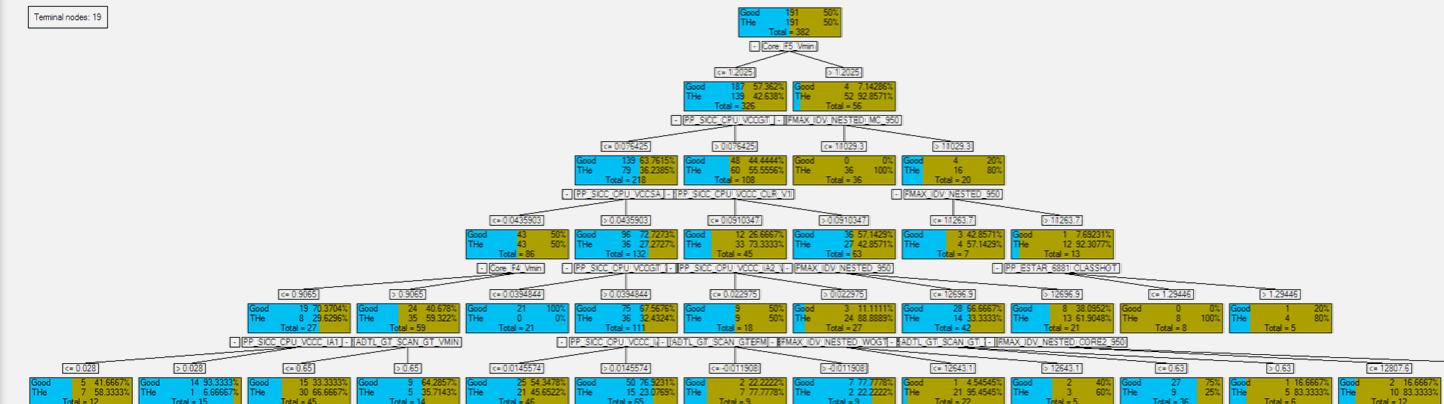
```
reduced_x = pipeline.fit_transform(numeric_x)
X_r2 = pd.DataFrame(reduced_x, columns=['X1', 'X2'])

# Percentage of variance explained for each components
print('Explained variance ratio (first two components): %s' % str(pca.explained_variance_ratio_))
ax = sns.regplot(data=X_r2, x='X1', y='X2', x_jitter=10**2, y_jitter=10)
plt.show()
```

Explained variance ratio (first two components): [ 0.8605536 0.055053]



Demo: Full scale “in-situ” descriptive, predictive, prescriptive, preemptive science from a singular workbench



Cluster+LSD+Pictures (2).html

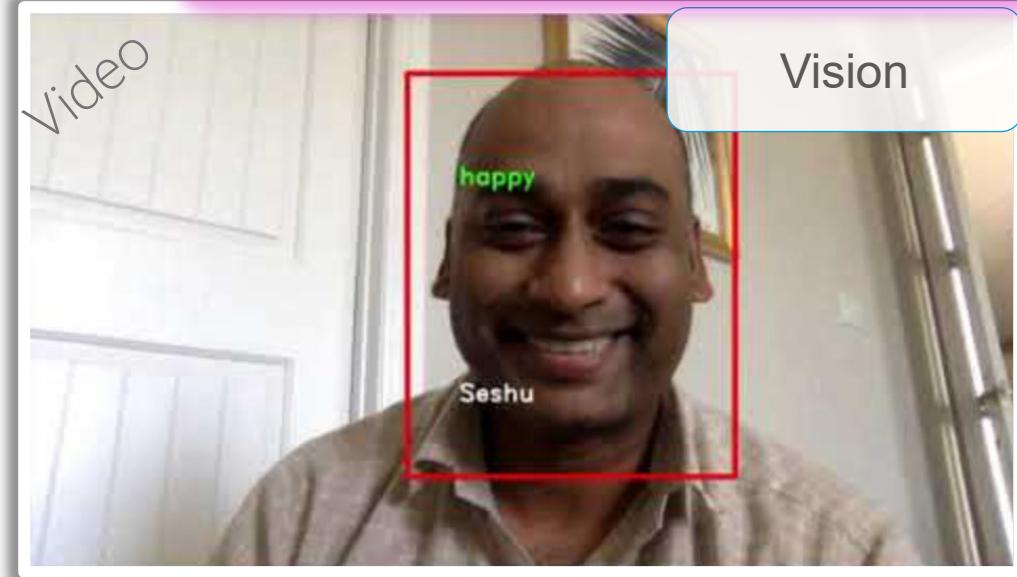


DPMCorrelationsSpecificThe.html

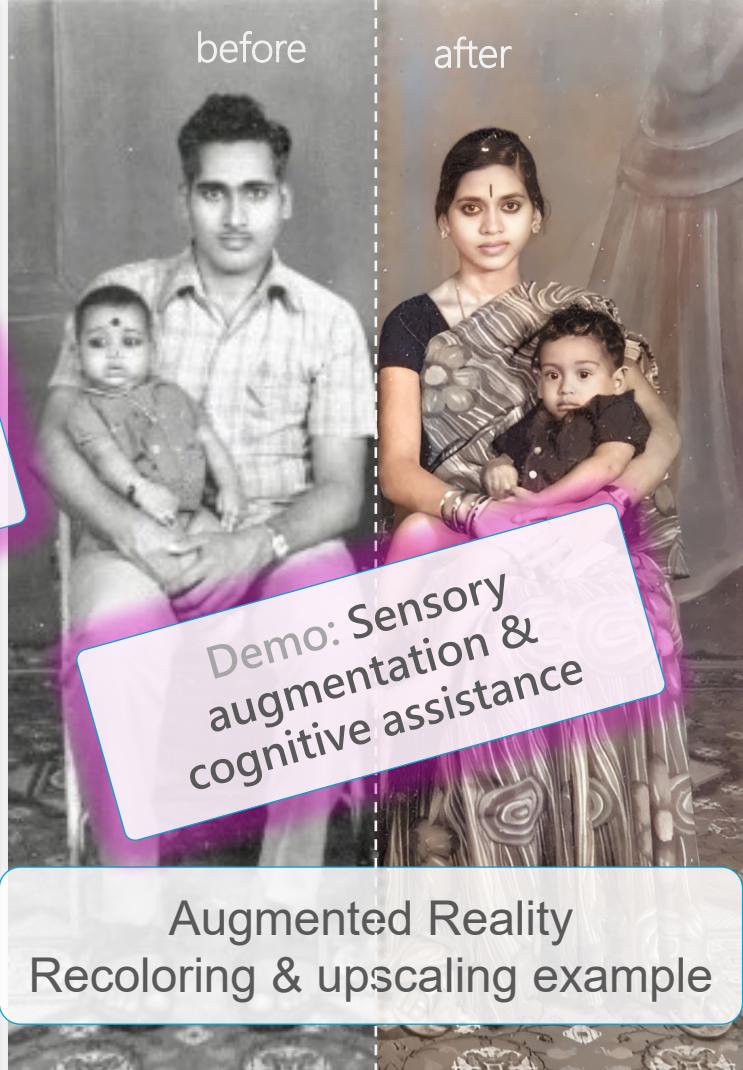
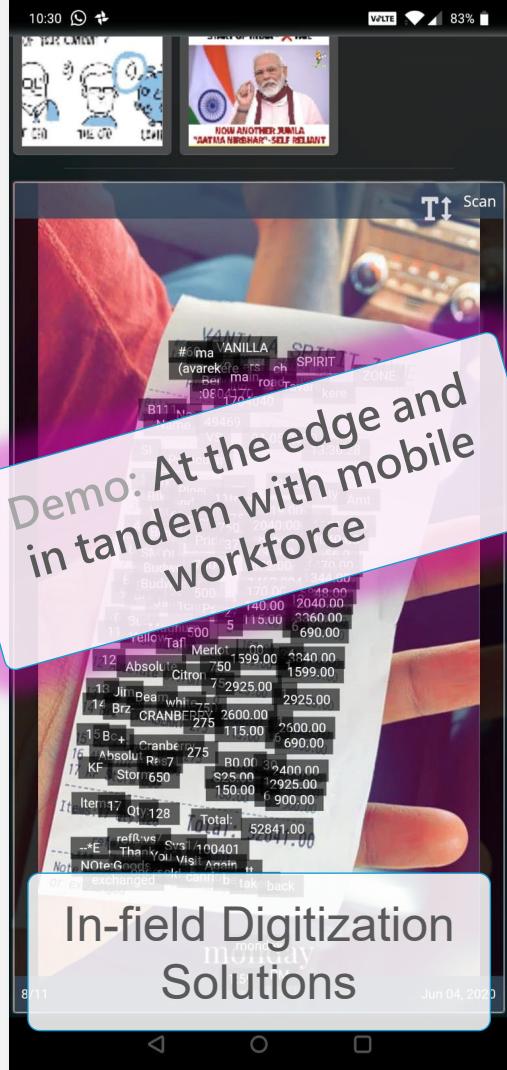
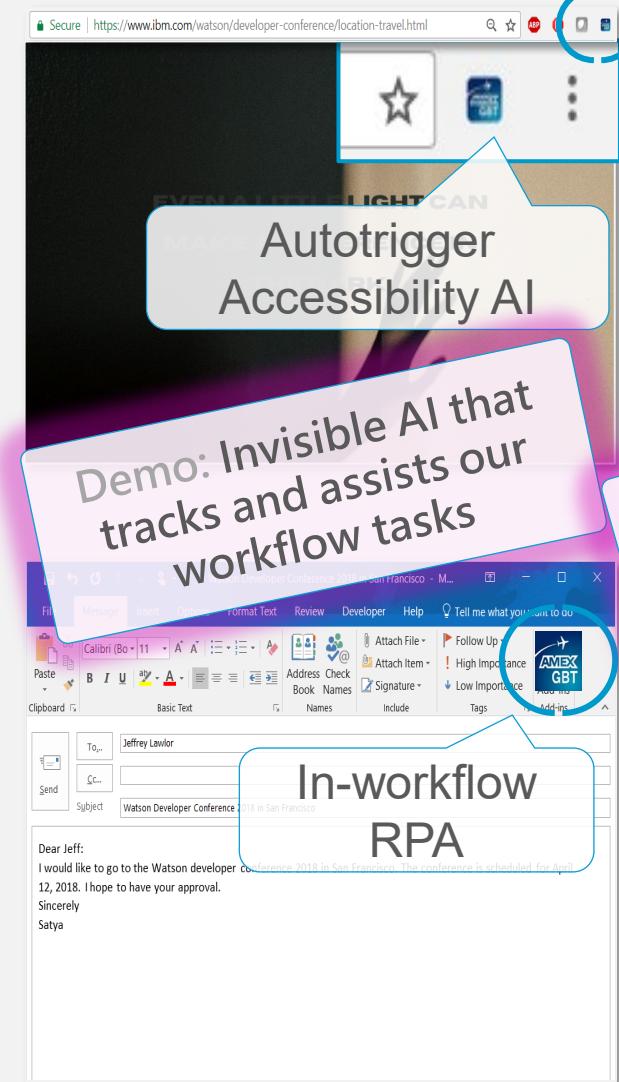


# AI Sensory Intelligence (AI)

Demo: Circa 2016, AI doing “sensory” actions: senses that belonged to human realm



# Accessibility & In-Situ Integration (Edge RPA)



# Generative AI

Human-on-the-loop

Bespoke Agent Central  
for the Enterprise

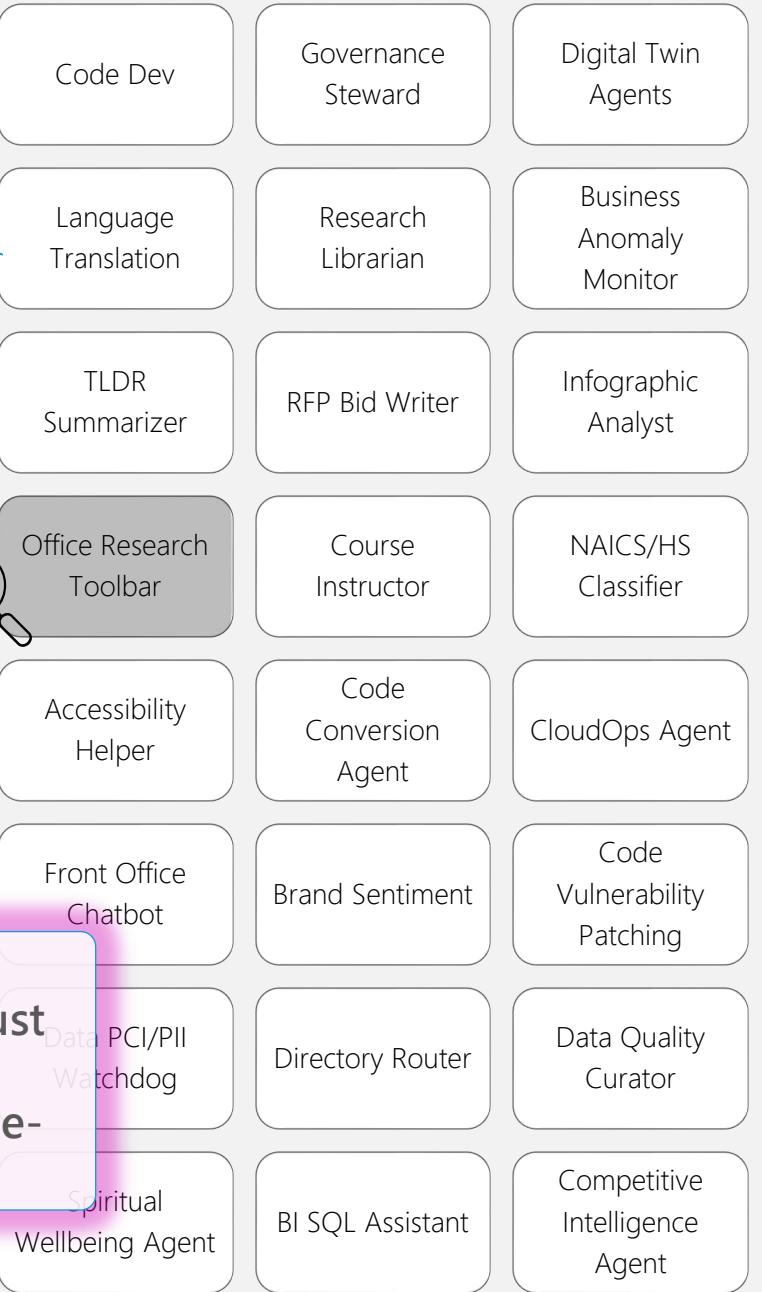


A screenshot of a Microsoft Word document. The ribbon at the top has a 'Research Copilot' button highlighted with a blue box. A callout bubble from the text 'Human-on-the-loop' points to this button. The main area shows a slide deck with ten slides. Slides include topics like 'Enterprise Adoption of Generative AI', 'Use Cases for Enterprises', 'Challenges in Enterprise Adoption', 'Data Privacy Concerns in Generative AI', 'Ethical Considerations for Enterprise Adoption', 'Challenges Related to Data Quality', 'Opportunities for Enterprise Adoption', 'Conclusion', and 'Q&A Session'.

10 second slides

Demo: 360 Diverse Human-  
on/off-the-Loop Outcomes. Just  
one example here...  
Not every AI is a Human-in-the-  
loop "Chatbot"

Iterate Outputs  
Quickly (in seconds)



# Keyword Coding

Misses the context

The screenshot shows a search interface for the HTS.USITC.GOV website. The search bar contains the query "snakes and ladders". A callout bubble labeled "User Query" points to the search bar. Below the search bar, there are tabs for "Rates", "Chapter Notes", and "Section Notes". The "Rates" tab is selected. On the left, a sidebar lists search results for "Reptiles (including snakes and turtles)" with codes 0106.20.00.00, 0208.50.00.00, and 0210.93.00.00. The main content area displays a table with columns for "Heading/Subheading", "Stat Suffix", "Article Description", "Unit of Quantity", and "RATES OF DUTY". The first row shows code 0106.31.00 with a stat suffix of "00" and an article description of "Birds of prey". The unit of quantity is "No." and the rates of duty are "1". The second row shows code 3926.90.99.30 with a stat suffix of "00" and an article description of "Psittaciformes (including parrots, parakeets, macaws and cockatoos)". The unit of quantity is "No." and the rates of duty are "1.8% 1/". A pink callout bubble at the bottom left points to the "Ladders" entry in the sidebar, with the text "Challenge: Old Term Search Does NOT WORK".

Heading/Subheading	Stat Suffix	Article Description	Unit of Quantity	RATES OF DUTY
0106.31.00	00	Birds of prey	No.	1
3926.90.99.30	00	Psittaciformes (including parrots, parakeets, macaws and cockatoos)	No.	1.8% 1/

# Intent Understanding

Search

snakes and ladders

 Search

 board game  strategy  rolling dice  snakes and ladders

Generate, Augment, Retrieve (NORAG)

_id	Code	HierarchicDescription	combined_score
6110	950440	parlour games including pintables billiards special tables for casino games and automata	75%
6112	950490	parlour games including pintables billiards special tables for casino games and automata	74%
6107	950400	parlour games including pintables billiards special tables for casino games and automata	74%
6111	950450	parlour games including pintables billiards special tables for casino games and automata	73%
6109	950450	parlour games including pintables billiards special tables for casino games and automata	72%
6108	950420	parlour games including pintables billiards special tables for casino games and automata	72%

Demo: Old Search Does NOT WORK

Now, embedding-based semantic search along with using LLMs to pivot from RAG to GAR yields better outcomes

Captures Gameboard Correctly

```
{"code":"950430", "description":"parlour games including pintables billiards special tables for casino games and automatic bowling machines operated by coins banknotes bank cards tokens of payment >> other games operated by coins banknotes any other means of payment other than automatic bowing", "explanation": "Although the passage doesn't specifically mention strategy and rolling dice terms, it is related to parlour games and various types of games. This code covers a wide range of games including those operated by coins or tokens."}
```



## 1) Delve deep into Lakehouses

**Progress Indicator** ⓘ

5 / 29 processed.  
fleet\_prd1\_us.analytics.sales\_full\_history...

**Abbreviation Settings** ⓘ

Upload your abbreviations CSV file

Drag and drop file here  
Limit 200MB per file • CSV

Browse files

**Wipe Abbreviations**

Abbreviation	Full Form
A	AMOUNT
ACCEPT	ACCEPTED
ACCS	ACCESS
ACT	ACCOUNT
ACCIDENT	ACCIDENT

Feed business nomenclature (opt)

**Challenge:** Everyone has a data warehouse. But is it cataloged and annotated for good use?

**Demo:** Let AI dig deep and annotate databases, tables, columns, and contents to help the stewards

## 2) Let mixed intelligence annotate thoroughly

### datalabs.lab\_sfmc\_extracts.lists

This table stores lists created by clients. Each list has a unique Client ID, List ID (which could be an identity), Name and Description. It also tracks the DateCreated when it was made, its Status indicating if active or inactive, as well as the type of List - which can be categorized under 'ListType'.

```
[
    ("ClientID", "Customer Client ID", "Unique identifier for a customer."),
    ("ListID", "IDENTITY (LIST)", "Identity or unique reference number of the list."),
    ("Name", "List Name", "The name given to the created list by client."),
    ("Description", "List Description", "A brief description about what is included in this particular list."),
    ("DateCreated", "Creation Date", "Shows when a specific list was made or generated."),
    ("Status", "Active/Inactive Status", "Indicates if the list is currently active or not, used to manage lists etc."),
    ("ListType", "Category of List Type", "Categorizes different types of lists created by clients.")
]
```

AI generated descriptions

### datalabs.lab\_sfmc\_extracts.sendjobs

This table stores information about jobs to send emails. Each job has a unique identity (ClientID) and is associated with another ID for the actual email message (SendID). It includes details like sender name, email address, scheduled time, sent time, subject line, recipient list name, triggering event external key, template external key, status of the job, URL to preview the content before sending, whether it's a multipart or single-part mail and any additional information. The table helps manage email campaigns efficiently by tracking their progress from creation to delivery.



# Locate Data

Search Query

Industry average price of technology stocks in 2017

Search

Clear history

Query: Industry average price of technology stocks in 2017

Vector Results:

	_id	_score	table_catalog	table_schema	table_name	table_description
0	minio_default_s_and_p_mapping_name:varchar	9.7345	minio	default	s_and_p_mapping	This table maps stock symbols to names.
1	minio_default_s_and_p_mapping_sector:varchar	9.6782	minio	default	s_and_p_mapping	This table maps stock symbols to sectors.
2	minio_default_s_and_p_mapping_symbol:varchar	9.6336	minio	default	s_and_p_mapping	This table maps stock symbols.
3	minio_default_s_and_p_5_years_name:varchar	6.274	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.
4	minio_default_s_and_p_5_years_high:double	6.2627	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.
5	minio_default_s_and_p_5_years_close:double	6.2572	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.
6	minio_default_s_and_p_5_years_open:double	6.2416	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.
7	minio_default_s_and_p_5_years_date:date	6.2142	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.
8	minio_default_s_and_p_5_years_low:double	6.2017	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.
9	minio_default_s_and_p_5_years_volume:integer	6.1546	minio	default	s_and_p_5_years	This table tracks stock and price over 5 years.

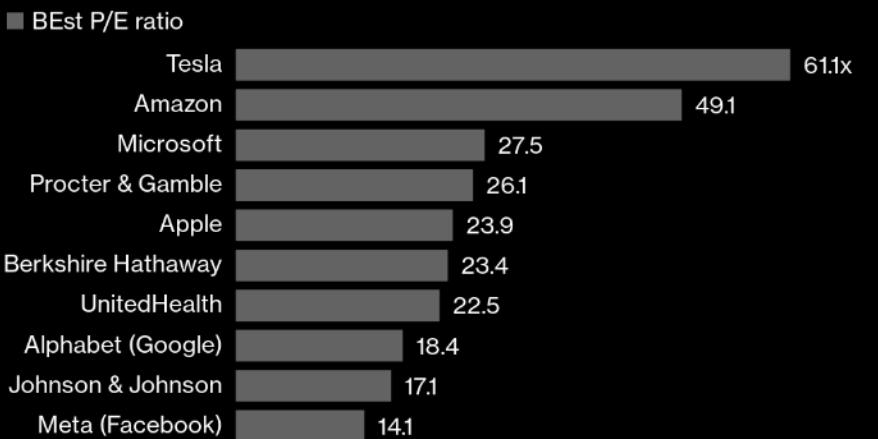
SQL Query:

```
SELECT AVG(close) AS avg_price  
FROM minio.default.s_and_p_5_years ssp, minio.default.s_and_p_mapping sm  
WHERE ssp.symbol = sm.symbol AND sm.sector LIKE '%Technology%';
```



## 3) Locate assets & compose SQL with ease

Longtime growth stocks Google and Facebook are now cheaper than many value stocks



## 4) Elicit insights from English

Challenge: SQL and BI skills are not universal

Demo: Let AI discover, author, and deliver insights

Machine Generated Insights

 New Chat



neural-chat:latest

[Set as default](#)

Workspace

 Search

Previous 30 days

Innovative Fed2Fed Use Cases: Di

June

## Roman Empire Facts

Internal Data Services Commercial

## Simple Demo Title

Private, Free Models

**Challenge: ChatGPT is great, but is it private & safe?**

# Demo: Deploy a ChatGPT functionality within your enterprise

Hello, Seshu

## How can I help you today

⚡ Suggested

## Give me ideas for what to do with my kids' art

Prompt

**Tell me a fun fact  
about the Roman Empire**

## Prompt

## Grammar check

rewrite it for better readability

## Prompts

Show me a code snippet of a website's sticky header.

Promp

# Host Private ChatGPT

+ Send a Message

LLMs can make mistakes. Verify important information.

Not secure | 192.168.27.10:34000/c/4f88e290-91f0-400b-ad93-78716312e45d

New Chat    Workspace    Search

Building location    ...

Judge Bio (3 words)

Previous 30 days

Innovative Fed2Fed Use Cases: Di

June

Roman Empire Facts

Internal Data Services Commerciali

Simple Demo Title

llava:latest

This building is the Supreme Court of the United States, located in Washington, D.C., at the corner of First and A Streets, N.E.

< 2/2 >

Omni Models

Where is this building?

Private, Secure Outcomes

Who presides here?

llava:latest

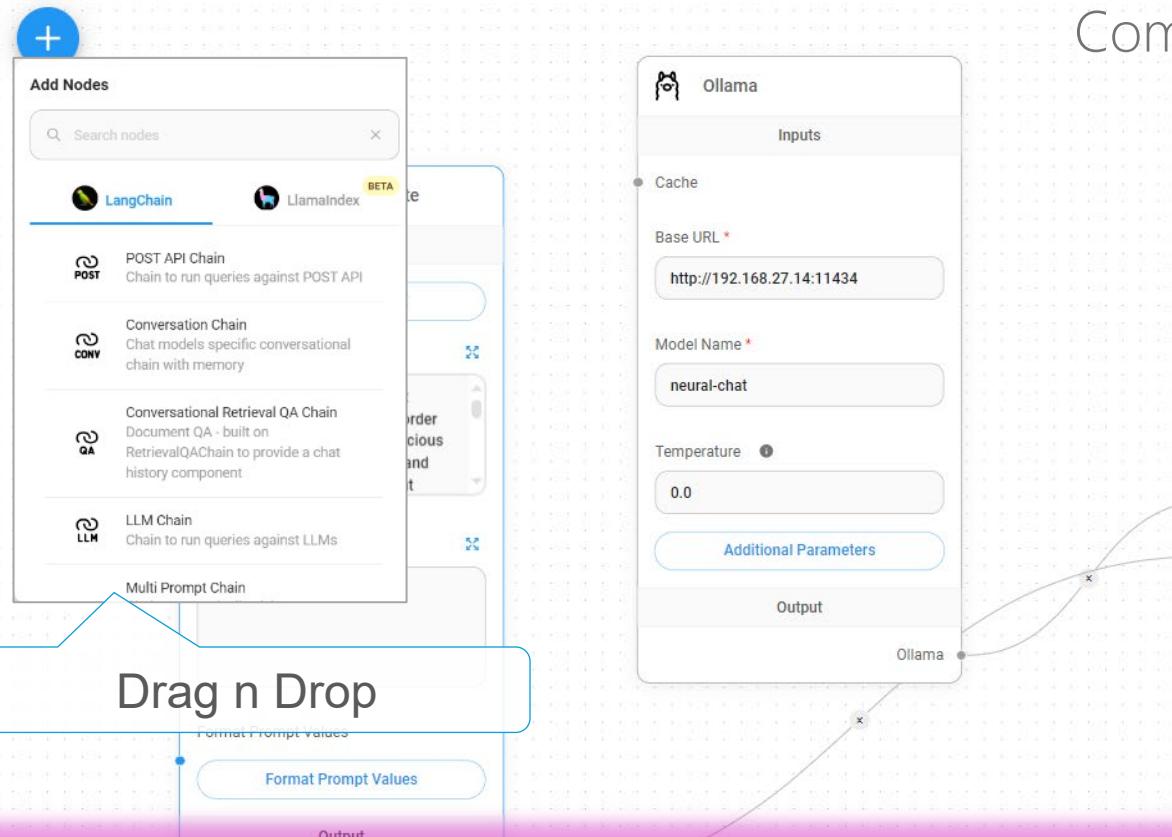
Challenge: Can Open Models beat Leaderboard Performance?

Demo: Plug-n-play leaderboard models easily

+ Send a Message

S Seshu

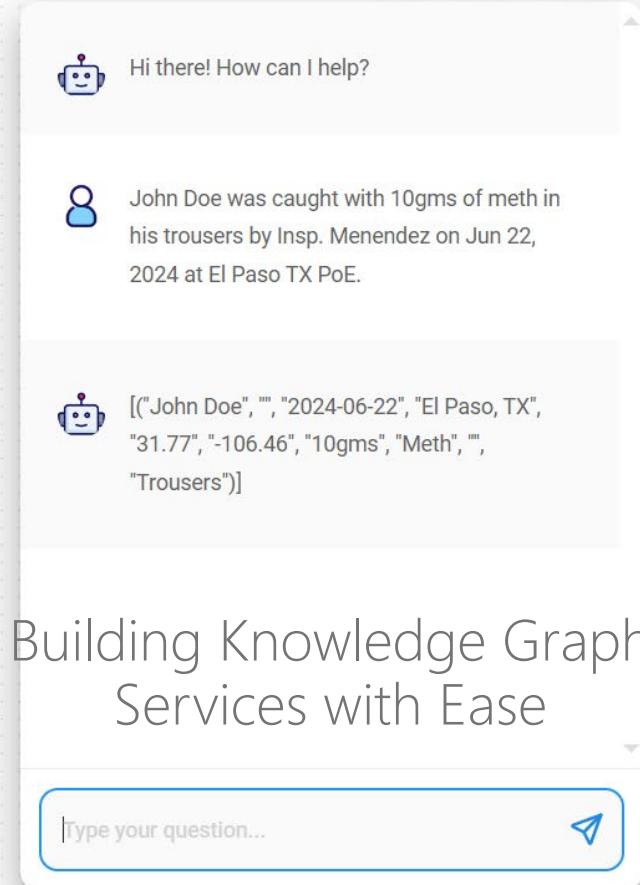
## Parse Triples



# Challenge: LangChain Programming Skills are Challenging

# Demo: Deliver Visual Programming Solutions

# Compose & Test AI Tools on a canvas



# Building Knowledge Graph Services with Ease

spanish-translator

Embed in website or use as API

Embed Python JavaScript CURL Share Chat No..

http://192.168.27.10:33000/chatbot/256c0bdf-c47d-4cc1-a35a-2b3cd3a60dcf

Make Public

Title

Flowise Assistant

1) Point-n-click AI Apps & Services

Title Avatar Link

https://raw.githubusercontent.com/FlowiseAI/Flowise/main/assets/FloWiseA

Welcome Message

Hello! This is custom welcome message

Error Message

This is custom error message

The screenshot shows a web-based configuration interface for a Spanish translator. It includes tabs for Embed, Python, JavaScript, CURL, and Share Chat. A 'Share Chat' button is highlighted with a tooltip 'No..'. Below these are fields for a URL (http://192.168.27.10:33000/chatbot/256c0bdf-c47d-4cc1-a35a-2b3cd3a60dcf), a 'Make Public' toggle switch, and sections for Title, Welcome Message, and Error Message.

Hi there! How can I help?

I have a dream that one day this nation will rise up and live out the true meaning of its creed.  
We hold these truths to be self-evident that all men are created equal

Yo tengo un sueño de que algún día esta nación se levantará y vivirá el verdadero significado de su credo. Creamos estas verdades ser auténticas, que todos los hombres son creados iguales.

2) Driving customer outcomes...

Build & Operate in Minutes

Challenge: Managing Gen AI APIs/Swarms is Challenging

Demo: Scaffold and scale Gen AI APIs, Apps, and Services Easily from Same Canvas

The screenshot shows a chatbot interface with a message in English followed by its Spanish translation. The English message is "I have a dream that one day this nation will rise up and live out the true meaning of its creed. We hold these truths to be self-evident that all men are created equal". The Spanish translation is "Yo tengo un sueño de que algún día esta nación se levantará y vivirá el verdadero significado de su credo. Creamos estas verdades ser auténticas, que todos los hombres son creados iguales". Below this, there are two numbered steps: "2) Driving customer outcomes..." and a large button labeled "Build & Operate in Minutes". At the bottom, there is a challenge statement and a demo statement.

## Text to Code & Code to Cloud

1 Feature/Requirement

Articulate  
requirements

2 Promptware  
Generate the code

Feature/Requirements

Seizure Folio

Video Recoloring

ML Flow

Docker Compose

Sales Trends

What is the requirement?

Create a folium heatmap that shows overlays of rentals, reservations, fleet levels, and workforce levels at various locations in the US for Hertz, a car rental company. The data is in [databricks](#). Date filters and location filters should be added in the sidebar. Keep code consistent in fewest files.

Next

From JIRA to Cloud in Hours, not sprints

Challenge: Requirements → Code → Cloud is Slow

For advanced coding & devops

The screenshot shows a web browser window titled "stop powerpoint screen recording" with the URL "192.168.27.10:8501". The main content area is titled "Text to Code & Code to Cloud". It features a flowchart with two main steps: "1 Feature/Requirement" (Articulate requirements) and "2 Promptware Generate the code". Below the flowchart, there are tabs for "Seizure Folio", "Video Recoloring", "ML Flow", "Docker Compose", and "Sales Trends". A text input field asks "What is the requirement?", with a placeholder: "Create a folium heatmap that shows overlays of rentals, reservations, fleet levels, and workforce levels at various locations in the US for Hertz, a car rental company. The data is in [databricks](#). Date filters and location filters should be added in the sidebar. Keep code files consistent and simple." A "Next" button is visible at the bottom. A "Video" watermark is present across the entire interface.

Mundane lift-n-shift to the cloud

The screenshot shows a web browser window titled "Code Refactoring Assistant" with the URL "192.168.27.10:8501". The main content area is titled "Code Refactoring Assistant". It displays a block of PL/SQL code intended for database schema migration:

```
DECLARE
    v_department_id NUMBER := 100;
    v_department_name VARCHAR2(100) := 'IT';
BEGIN
    -- Insert into the departments table
    INSERT INTO departments(department_id, department_name) VALUES (v_department_id, v_department_name);
    COMMIT;

    -- Insert into the employees table
    INSERT INTO employees(emp_id, emp_name, department_id)
    VALUES (101, 'John Doe', v_department_id);
    INSERT INTO employees(emp_id, emp_name, department_id)
    VALUES (102, 'Jane Smith', v_department_id);
    INSERT INTO employees(emp_id, emp_name, department_id)
    VALUES (103, 'Michael Johnson', v_department_id);
    COMMIT;
```

A "Convert" button is located at the bottom right. A "Video" watermark is present across the entire interface.

Demo: AI Developed Software Bootstraps “Archetypes” Quickly

# Swift Promptware Releases in Hours

Create a folium heatmap that shows overlays of rentals, reservations, fleet levels, and workforce levels at various locations in the US for Hertz, a car rental company. The data is in [databricks](#). Date filters and location filters should be added in the sidebar. Keep code consistent in fewest files.

10AM

3PM

