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# CAPSTONE PROJECT

## IPL MATCH ANALYSIS USING AI

**Presented By:**

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**Department :** Computer Science and Engineering

# OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

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# PROBLEM STATEMENT

## **Challenge:**

Difficulty in analyzing and interpreting large volumes of IPL match data.

Manual analysis is time-consuming and prone to errors.

## **Proposed Solution:**

An AI Research Agent that utilizes Natural Language Processing (NLP) and Retrieval-Augmented Generation(RAG) to analyze IPL match data efficiently.

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# TECHNOLOGY USED

IBM cloud lite services

Natural Language Processing (NLP)

Retrieval Augmented Generation (RAG)

IBM Granite model

# IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

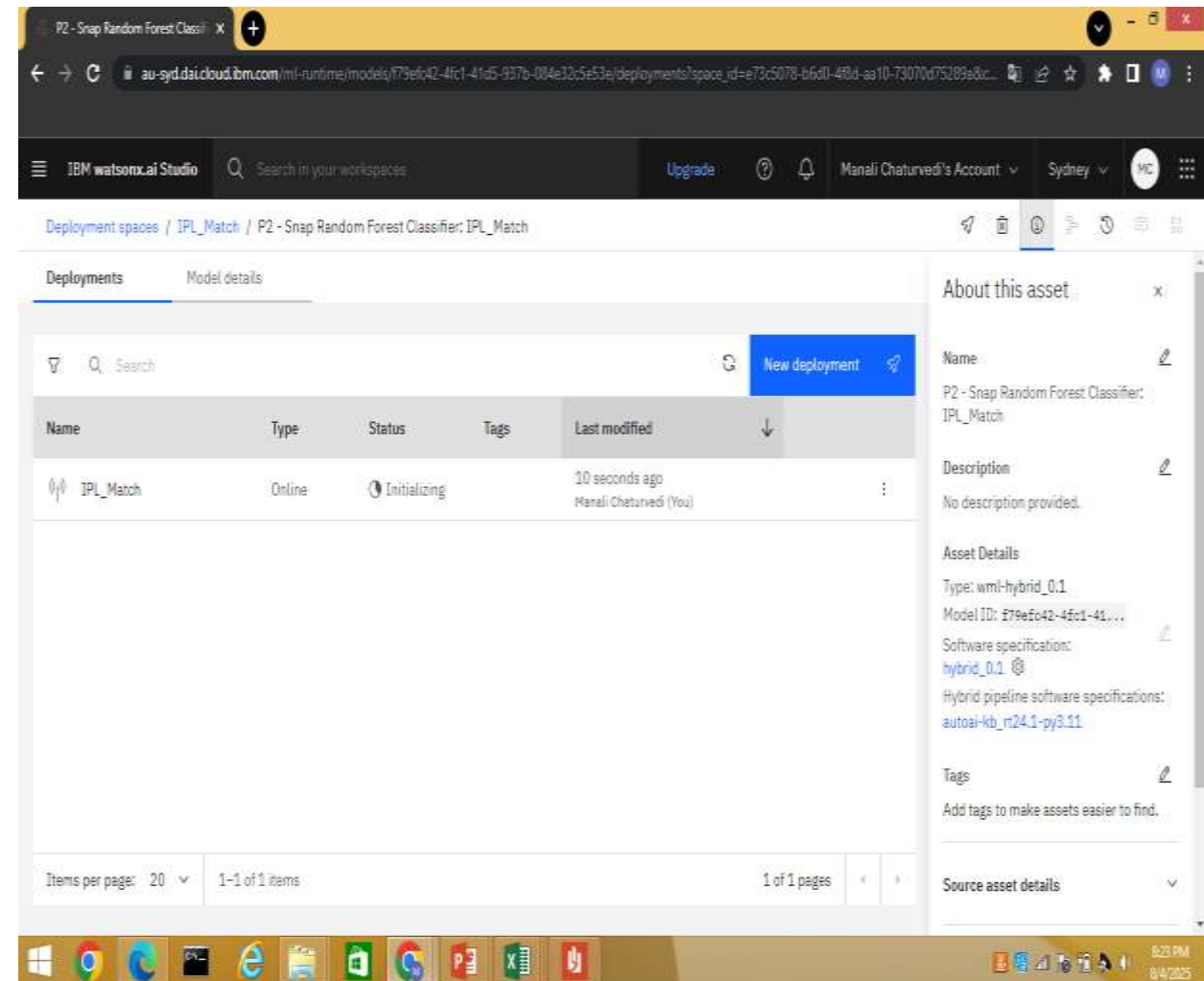
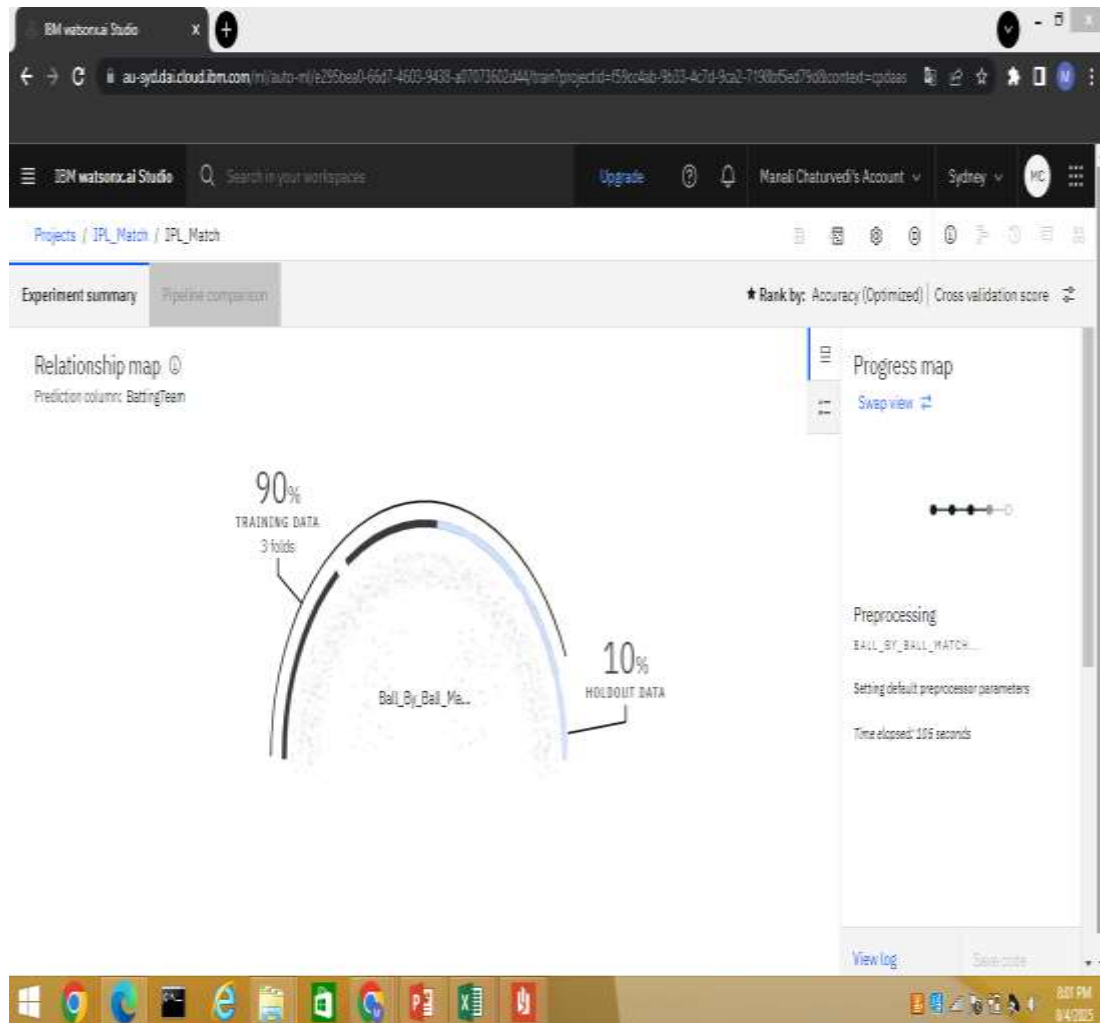
# WOW FACTORS

- **Key Features:**
- Semantic search for match statistics and player performance.
- Auto-summarization of match reports.
- Citation and reference analysis for historical match data.
- Recommendations for players based on performance trends.
- Collaboration mapping for team strategies.

# END USERS

- **Target Audience**
- :Cricket Analysts
- Sports Researchers
- Coaches and Team Managers
- Sports Enthusiasts

# RESULTS





# RESULTS

The screenshot displays the IBM Watsonx.ai Studio interface. The browser address bar shows the URL: `au-syd.dai.cloud.ibm.com/ml-runtime/models/2e440a09-2ad8-4139-959e-3dd5da1a8c1b?project_id=f59cc4ab-9b33-4c7d-9ca2-7198bf5ed79d&context=cp...`. The page title is "P2 - Snap Random Forest Classifier: IPL\_Match".

The main content area shows the "Input (1)" section with a table of input features:

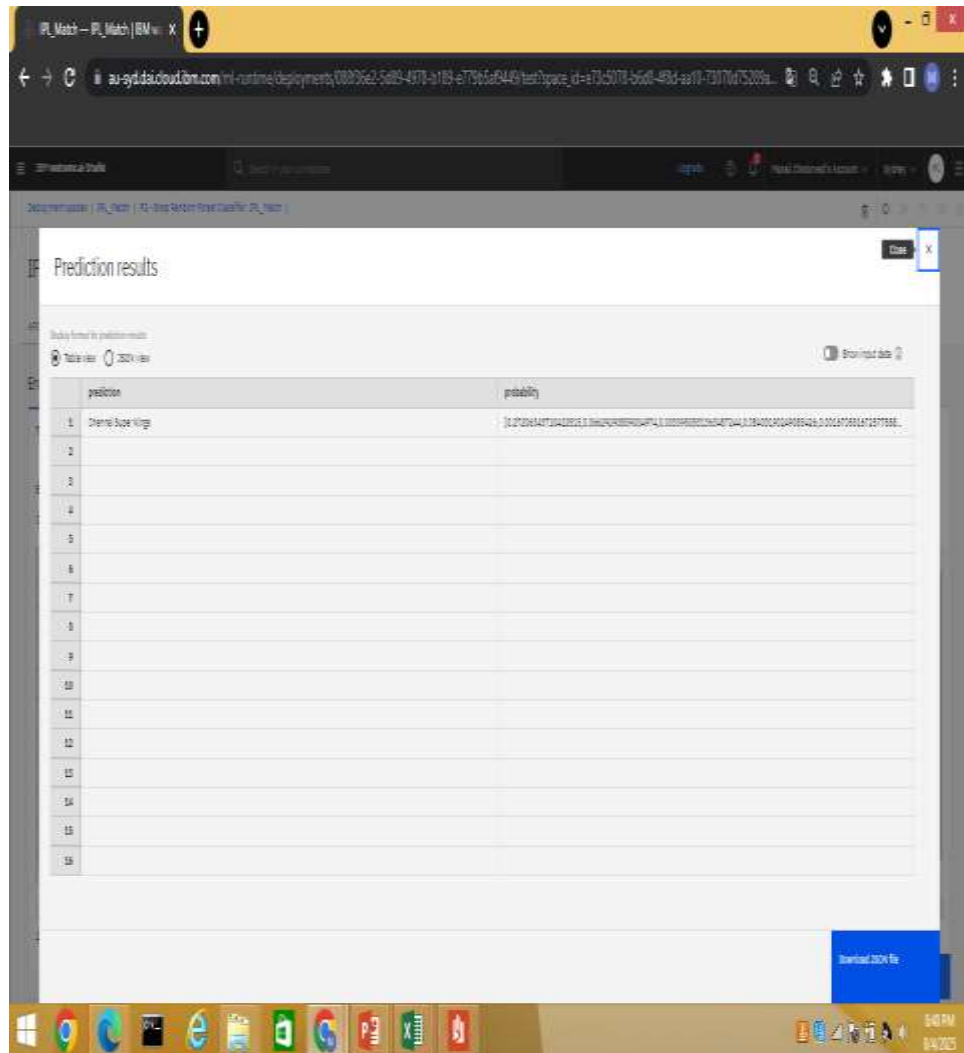
Column	Type
BallNumber	double
BatsmanRun	double
Batter	other
Bowler	other
ExtrasRun	double
ExtraType	other
FieldersInvolved	other
ID	double

On the right side, the "About this asset" panel is open, displaying the following information:

- Name:** P2 - Snap Random Forest Classifier: IPL\_Match
- Description:** No description provided.
- Asset Details:**
  - Type: wml-hybrid\_0.1
  - Model ID: 2e440a09-2ad8-41...
  - Software specification: hybrid\_0.1
  - Hybrid pipeline software specifications: autoai-kb\_rt24.1-py3.11
- Tags:** Add tags to make assets easier to find.
- Last modified:** 22 seconds ago by Manali Chaturvedi

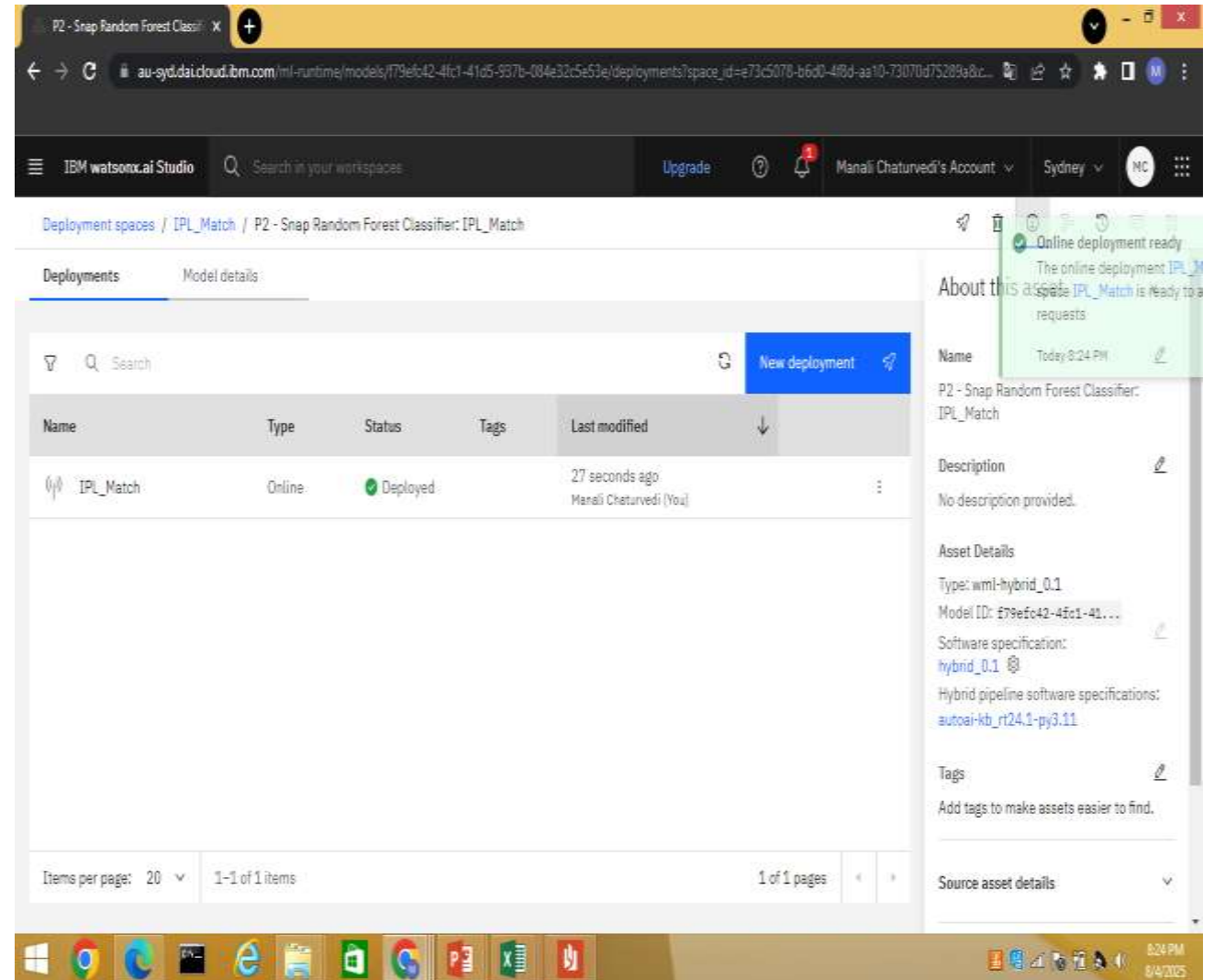
The Windows taskbar at the bottom shows the time as 8:15 PM on 8/4/2025.

# RESULTS



The screenshot shows the 'Prediction results' page in IBM Watson AI Studio. The URL is [au-syd.dai.cloud.ibm.com/ml-runtime/deployments/1802962-5a95-4378-a189-a7595a9446/ten?space\\_id=a73c5078-b6d0-4f8d-aa10-7317075289a8&asset\\_id=a73c5078-b6d0-4f8d-aa10-7317075289a8](https://au-syd.dai.cloud.ibm.com/ml-runtime/deployments/1802962-5a95-4378-a189-a7595a9446/ten?space_id=a73c5078-b6d0-4f8d-aa10-7317075289a8&asset_id=a73c5078-b6d0-4f8d-aa10-7317075289a8). The page displays a table with two columns: 'prediction' and 'probability'. The first row shows a prediction of 'Chennai Super Kings' with a probability of 0.07038447734429583. The rest of the table is empty. A 'Download CSV file' button is at the bottom right.

	prediction	probability
1	Chennai Super Kings	0.07038447734429583
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		



The screenshot shows the 'Deployments' page in IBM Watson AI Studio. The URL is [au-syd.dai.cloud.ibm.com/ml-runtime/models/f79efc42-4fc1-41d5-937b-084e32c5e53e/deployments?space\\_id=a73c5078-b6d0-4f8d-aa10-7317075289a8&asset\\_id=a73c5078-b6d0-4f8d-aa10-7317075289a8](https://au-syd.dai.cloud.ibm.com/ml-runtime/models/f79efc42-4fc1-41d5-937b-084e32c5e53e/deployments?space_id=a73c5078-b6d0-4f8d-aa10-7317075289a8&asset_id=a73c5078-b6d0-4f8d-aa10-7317075289a8). The page shows a table with one deployment: 'IPL\_Match' (Online, Deployed). A 'New deployment' button is at the top right. A notification banner at the top right says 'Online deployment ready'.

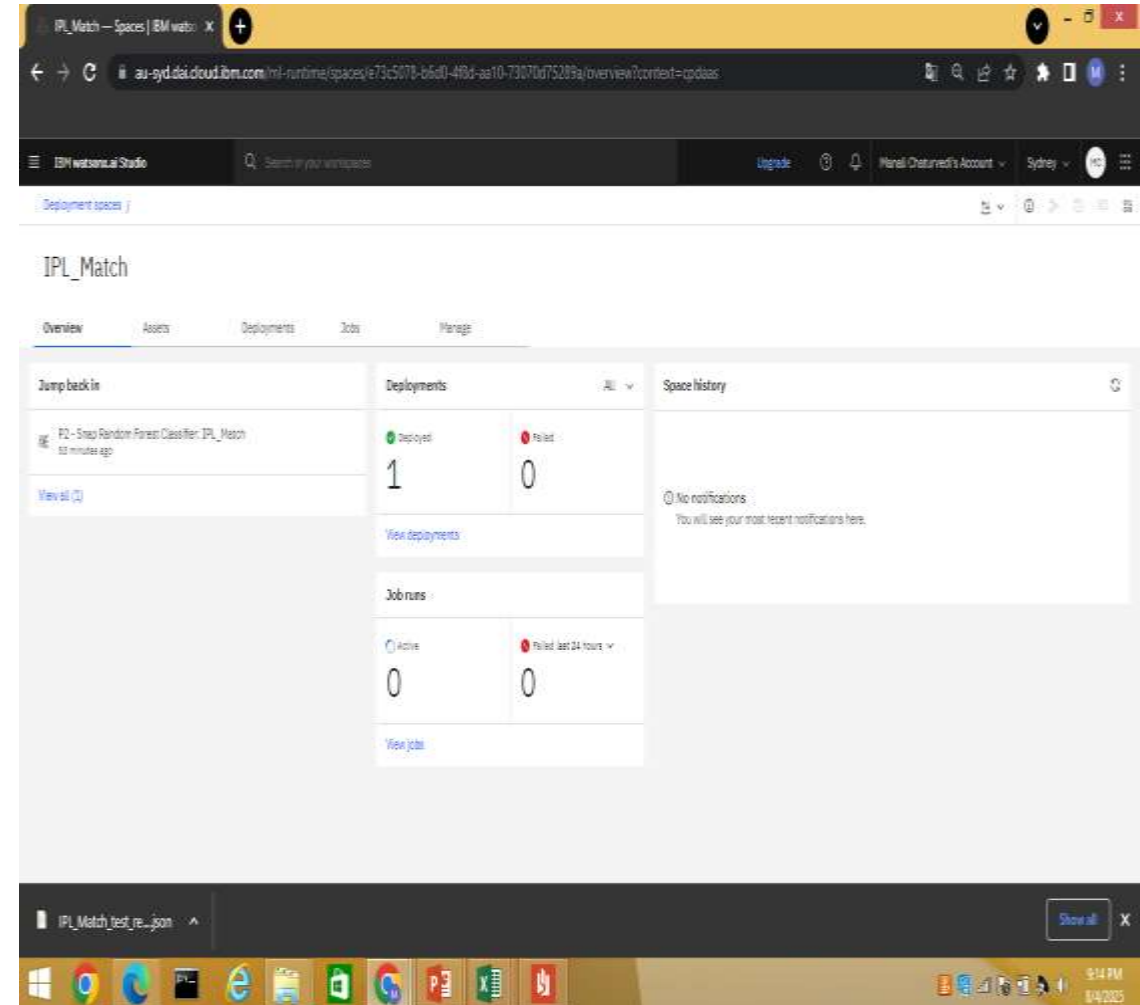
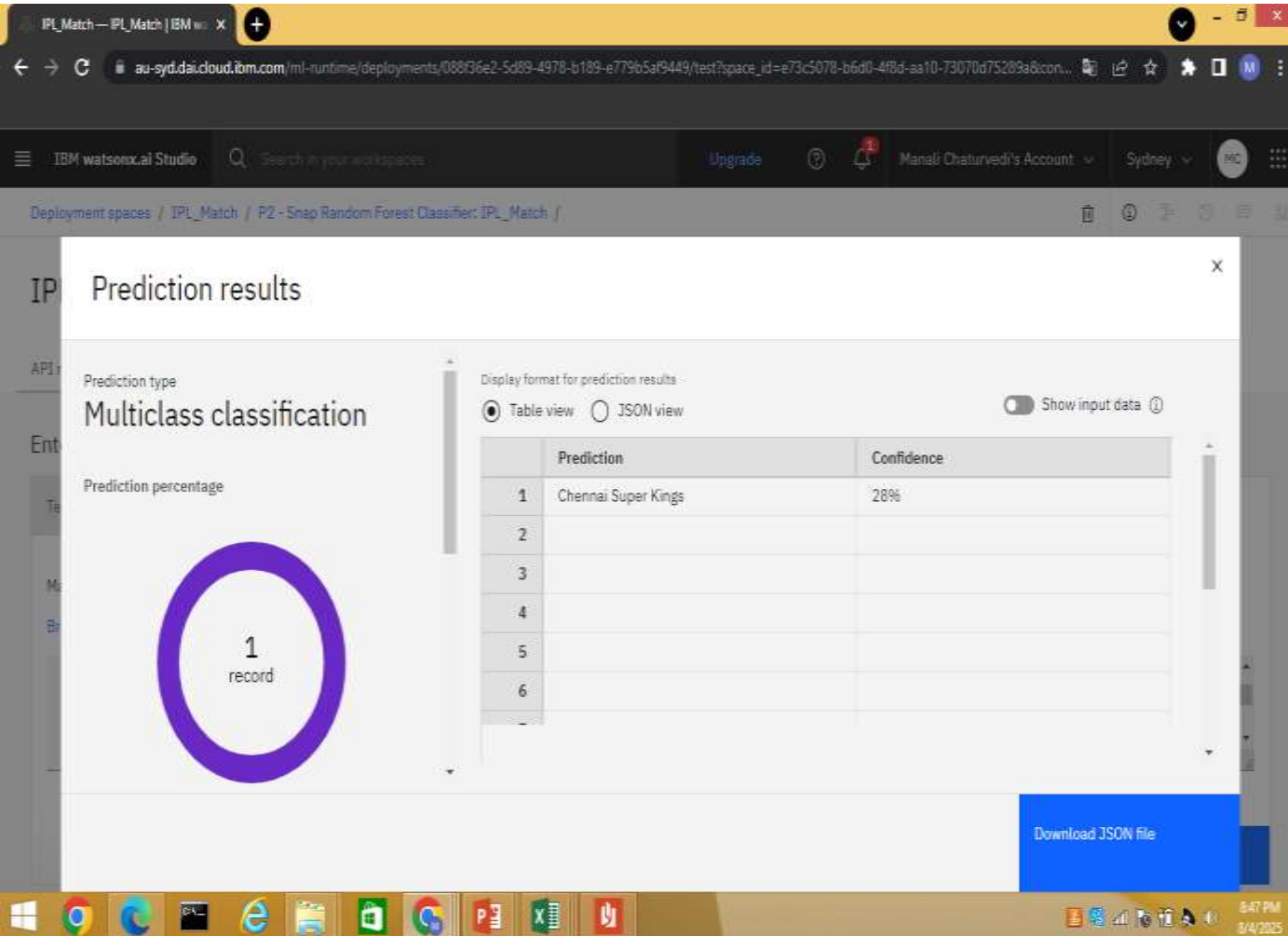
Name	Type	Status	Tags	Last modified
IPL_Match	Online	Deployed		27 seconds ago Manali Chaturvedi (You)

Items per page: 20 | 1-1 of 1 items | 1 of 1 pages

Notification: Online deployment ready. The online deployment IPL\_Match is ready to accept requests. Today: 8:24 PM.

About this asset: P2 - Snap Random Forest Classifier: IPL\_Match. Description: No description provided. Asset Details: Type: wml-hybrid\_0.1, Model ID: f79efc42-4fc1-41d5-937b-084e32c5e53e, Software specification: hybrid\_0.1, Hybrid pipeline software specifications: autoai-kb\_rt24.1-py3.11. Tags: Add tags to make assets easier to find. Source asset details.

# RESULTS



# CONCLUSION

## Summary:

- The AI agent automates data analysis, saving time and improving accuracy.
- It enhances the quality of insights derived from IPL match data.
- Future potential for integration with live match data for real-time analysis.

# FUTURE SCOPE

- **Future Enhancements:**
- Multilingual support for global audiences.
- Voice-activated features for hands-free analysis.
- Real-time collaboration tools for team discussions.
- Integration with sports analytics platforms.

# IBM CERTIFICATIONS

1

In recognition of the commitment to achieve professional excellence



## Manali Chaturvedi

Has successfully satisfied the requirements for:

### Getting Started with Artificial Intelligence



Issued on: Jul 28, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/4ec35133-b387-4881-9ff7-90898507522a>





This certificate is presented to

Manali Chaturvedi

for the completion of

## **Lab: Retrieval Augmented Generation with LangChain**

(ALM-COURSE\_3824998)

According to the Adobe Learning Manager system of record

**Completion date:** 01 Aug 2025 (GMT)

**Learning hours:** 20 mins

In recognition of the commitment to achieve  
professional excellence



# Manali Chaturvedi

Has successfully satisfied the requirements for:

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## Journey to Cloud: Envisioning Your Solution

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Issued on: Aug 01, 2025  
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/3c7d96ba-989a-4091-9c9b-450fbd68cf9b>





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## GITHUB LINK

<https://github.com/ManaliChaturvedi/IPL-Match-Analysis>



**THANK YOU**