IBM AICTE PROJECT

AI-DRIVEN PLAGIARISM INTELLIGENCE FOR ASSIGNMENTS

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PROBLEM STATEMENT

Problem:
Academic institutions face challenges detecting advanced plagiarism, especially AI-assisted paraphrasing from unauthorized sources. Existing tools often miss AI-generated writing styles and nuanced rewording.

Solution:
An AI-powered plagiarism detection system built entirely in **IBM Watsonx.ai Open Prompt Lab**.
It uses carefully engineered prompts to:

- Identify **Direct Copy**, **Paraphrased Copy**, and **Original Work**.
- Detect **AI-generated** and **AI-paraphrased** content based on style and tone.
- Provide a clear integrity report without any coding.

TECHNOLOGY USED

- **IBM Cloud Lite Services** – Free-tier cloud platform for building and testing AI solutions.
- **Natural Language Processing (NLP)** – For analyzing, comparing, and classifying text.
- **Retrieval Augmented Generation (RAG)** – For matching submissions against unauthorized reference sources.
- **IBM Granite- Model** – Granite model 3.8 instruct is foundation model used for plagiarism detection and AI-writing style analysis.

IBM CLOUD SERVICES USED

- **IBM Cloud Watsonx.ai Studio** – Here it is workspace used for designing and testing plagiarism detection prompts.
- **IBM Cloud Watsonx.ai Runtime** – Executes foundation models and delivers structured output.
- **IBM Cloud Agent Lab** – Builds and manages AI agents for automated plagiarism checks.
- **IBM Granite Foundation Model** – Core LLM for plagiarism classification and AI-writing style detection.

WOW FACTORS

This AI agent will help educators save time, improve plagiarism detection accuracy, and maintain academic integrity by identifying direct copy, paraphrased, and AI-generated content in assignments. It provides clear, structured reports without requiring coding skills..

Unique features:

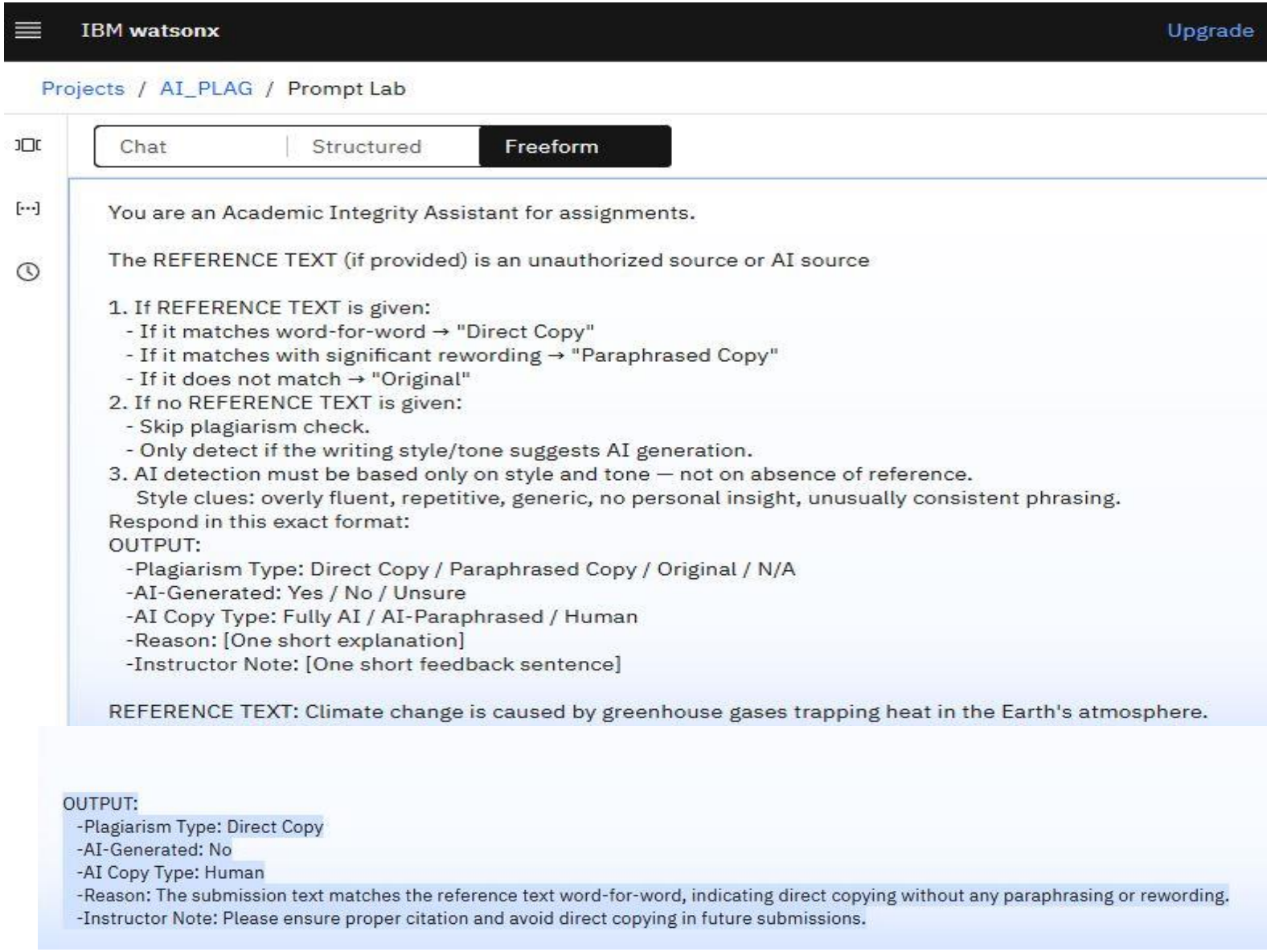
- **Dual Detection:** Identifies plagiarism and AI-generated writing style in one process.
- **Reference Optional:** Works with or without an unauthorized source text.
- **AI-Paraphrase Recognition:** Detects AI-assisted rewording of stolen content.
- **Instructor Feedback:** Generates short, ready-to-use comments for educators.
- **Clear Integrity Reports:** Generates Outputs with plagiarism type, AI detection, AI Copy type, reason, instructor note in one format.

END USERS

- **Teachers & Professors** – To check assignments and essays for originality.
- **Academic Integrity Officers** – To enforce plagiarism policies in institutions.
- **Research Supervisors** – To verify authenticity of research papers and theses.
- **Corporate Training Managers** – To assess originality in employee training tasks.
- **Content Reviewers & Editors** – To ensure originality in published material.

RESULTS

TEST CASE 1: DIRECT COPY



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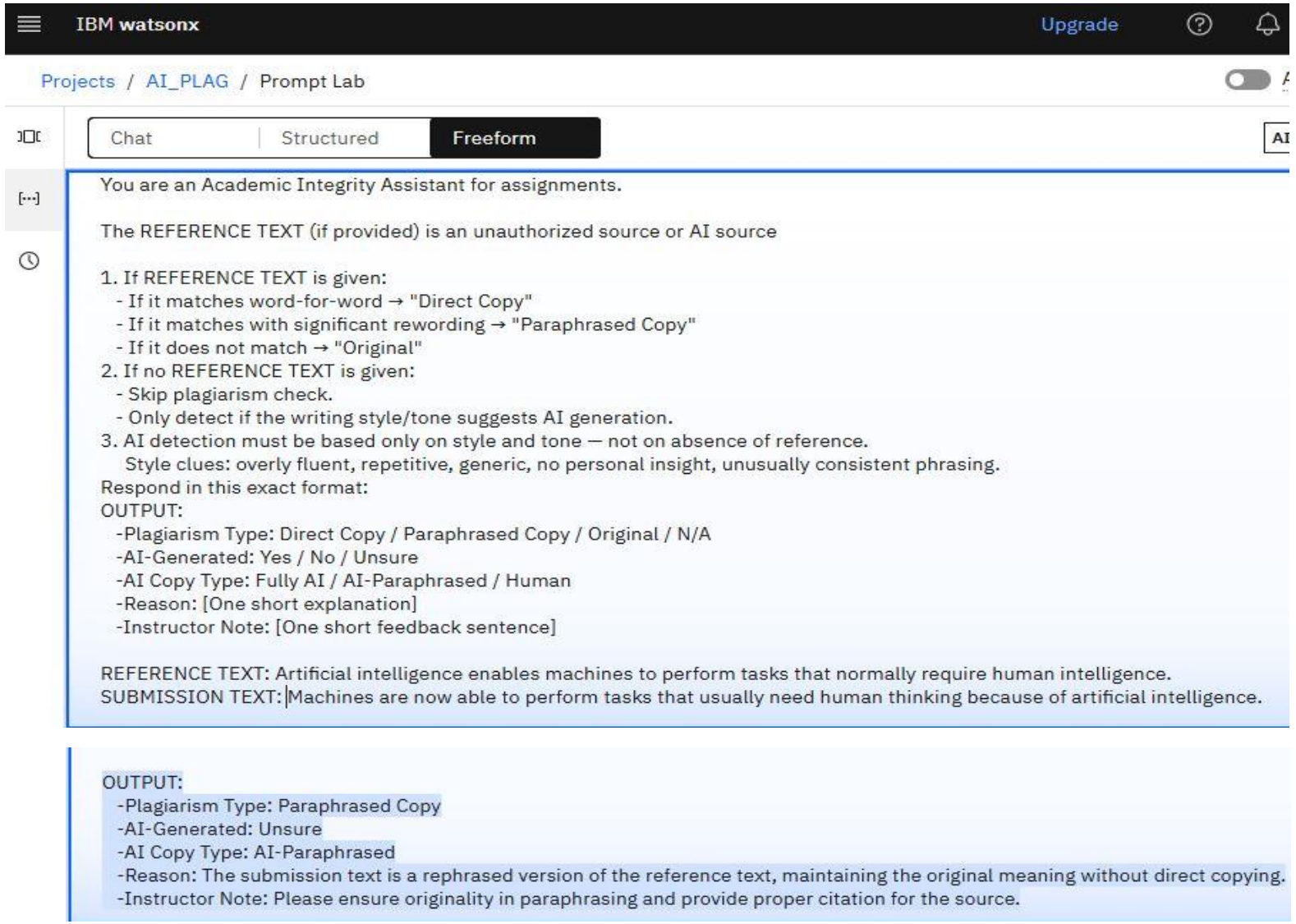
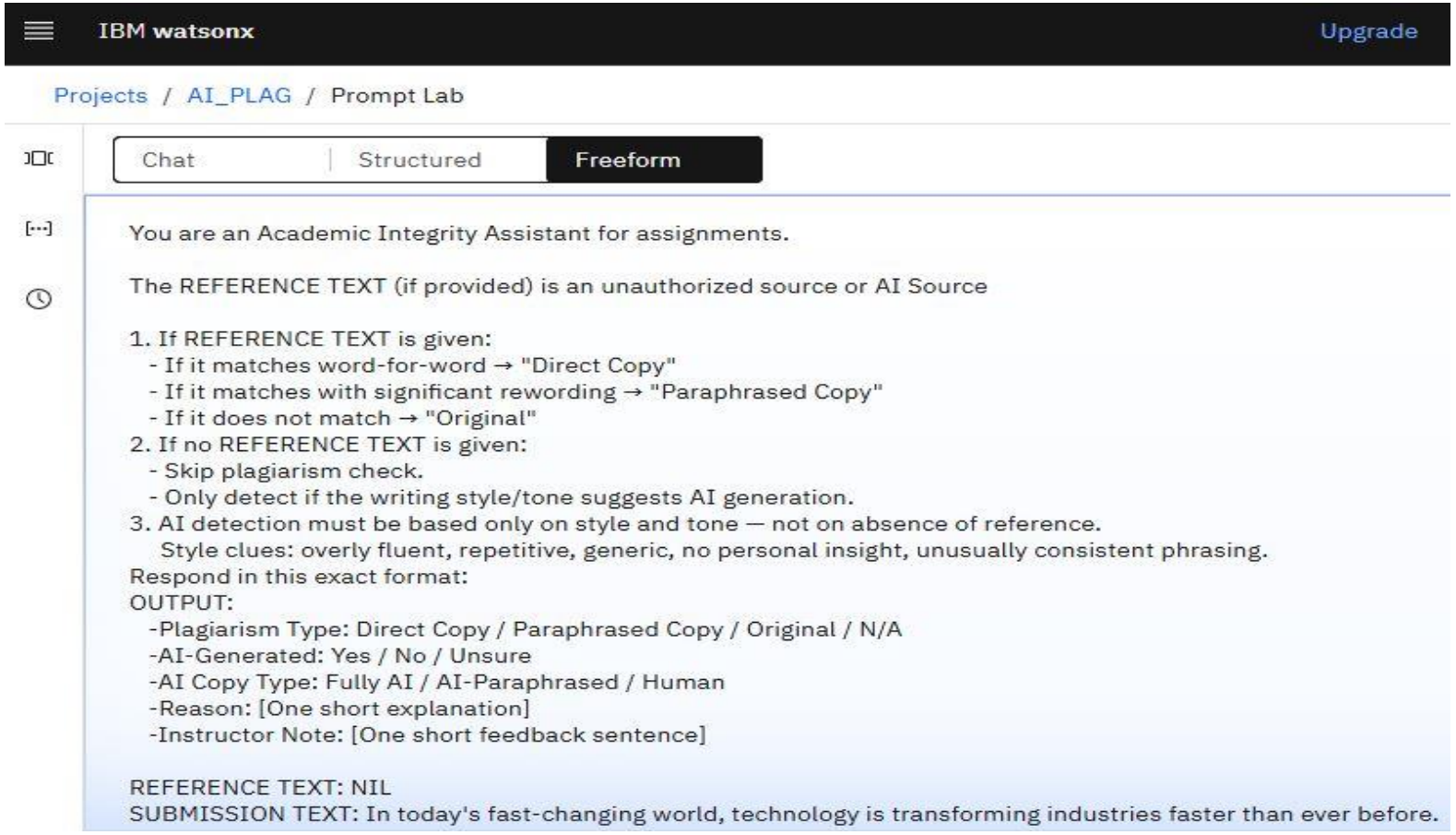
RESULTS

TEST CASE 2: AI PARAPHRASED



RESULTS

TEST CASE 3: ORIGINAL



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CONCLUSION

- The AI-Driven Plagiarism Intelligence system in **IBM Watsonx.ai Open Prompt Lab** accurately detects direct copy, AI-paraphrasing, and original writing.
- It provides clear integrity reports, helping educators and organizations maintain originality and fairness.
- The no-code, cloud-based approach makes it easy to use, scalable, and adaptable to various academic and corporate needs.

GITHUB LINK

https://github.com/RPRK01/AI_PLAGIARISM_INTELLIGENCE/tree/main

FUTURE SCOPE

- **Multilingual Support** – Detect plagiarism and AI content in multiple languages.
- **Integration with LMS** – Connect with platforms like Moodle or Google Classroom.
- **Advanced Semantic Analysis** – Improve accuracy for deeply rephrased text.
- **Batch Processing** – Check multiple submissions at once for large classes.
- **Detailed AI Style Report** – Provide deeper breakdown of AI writing patterns.
- **Cloud API Access** – Allow third-party tools to use the plagiarism detection service.

IBM CERTIFICATIONS

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IBM **SkillsBuild** Completion Certificate

This certificate is presented to

Kanishkaraj . R. P. R

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT) **Learning hours:** 20 mins

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THANK YOU

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