
IBM AICTE PROJECT

AI-DRIVEN PLAGIARISM INTELLIGENCE FOR ASSIGNMENTS

Presented By:

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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


 IBM watsonx Upgrade

Projects / AI_PLAG / Prompt Lab

 Chat | **Structured** | Freeform

 You are an Academic Integrity Assistant for assignments.

 The REFERENCE TEXT (if provided) is an unauthorized source or AI source



- If REFERENCE TEXT is given:
 - If it matches word-for-word → "Direct Copy"
 - If it matches with significant rewording → "Paraphrased Copy"
 - If it does not match → "Original"
- If no REFERENCE TEXT is given:
 - Skip plagiarism check.
 - Only detect if the writing style/tone suggests AI generation.
- AI detection must be based only on style and tone — not on absence of reference.
Style clues: overly fluent, repetitive, generic, no personal insight, unusually consistent phrasing.

Respond in this exact format:

OUTPUT:

- Plagiarism Type: Direct Copy / Paraphrased Copy / Original / N/A
- AI-Generated: Yes / No / Unsure
- AI Copy Type: Fully AI / AI-Paraphrased / Human
- Reason: [One short explanation]
- Instructor Note: [One short feedback sentence]

REFERENCE TEXT: Climate change is caused by greenhouse gases trapping heat in the Earth's atmosphere.

OUTPUT:

- Plagiarism Type: Direct Copy
- AI-Generated: No
- AI Copy Type: Human
- Reason: The submission text matches the reference text word-for-word, indicating direct copying without any paraphrasing or rewording.
- Instructor Note: Please ensure proper citation and avoid direct copying in future submissions.

RESULTS

TEST CASE 2: AI PARAPHRASED

The screenshot displays the IBM watsonx interface. At the top, there's a navigation bar with 'IBM watsonx', an 'Upgrade' button, and help/notification icons. Below this is a breadcrumb trail: 'Projects / AI_PLAG / Prompt Lab'. The main interface has a sidebar with icons for chat, history, and a settings menu. The top of the main area has tabs for 'Chat', 'Structured', and 'Freeform', with 'Freeform' being the active tab. The chat area contains the following text:

You are an Academic Integrity Assistant for assignments.

The REFERENCE TEXT (if provided) is an unauthorized source or AI source

1. If REFERENCE TEXT is given:
 - If it matches word-for-word → "Direct Copy"
 - If it matches with significant rewording → "Paraphrased Copy"
 - If it does not match → "Original"
2. If no REFERENCE TEXT is given:
 - Skip plagiarism check.
 - Only detect if the writing style/tone suggests AI generation.
3. AI detection must be based only on style and tone — not on absence of reference.
 - Style clues: overly fluent, repetitive, generic, no personal insight, unusually consistent phrasing.

Respond in this exact format:

OUTPUT:

- Plagiarism Type: Direct Copy / Paraphrased Copy / Original / N/A
- AI-Generated: Yes / No / Unsure
- AI Copy Type: Fully AI / AI-Paraphrased / Human
- Reason: [One short explanation]
- Instructor Note: [One short feedback sentence]

REFERENCE TEXT: Artificial intelligence enables machines to perform tasks that normally require human intelligence.


SUBMISSION TEXT: Machines are now able to perform tasks that usually need human thinking because of artificial intelligence.

Below the chat area, the 'OUTPUT:' section shows the results of the analysis:


- Plagiarism Type: Paraphrased Copy
- AI-Generated: Unsure
- AI Copy Type: AI-Paraphrased
- Reason: The submission text is a rephrased version of the reference text, maintaining the original meaning without direct copying.
- Instructor Note: Please ensure originality in paraphrasing and provide proper citation for the source.

RESULTS


TEST CASE 3: ORIGINAL


 IBM watsonx Upgrade

Projects / AI_PLAG / Prompt Lab



Chat | Structured | **Freeform**





You are an Academic Integrity Assistant for assignments.

The REFERENCE TEXT (if provided) is an unauthorized source or AI Source

1. If REFERENCE TEXT is given:
 - If it matches word-for-word → "Direct Copy"
 - If it matches with significant rewording → "Paraphrased Copy"
 - If it does not match → "Original"
2. If no REFERENCE TEXT is given:
 - Skip plagiarism check.
 - Only detect if the writing style/tone suggests AI generation.
3. AI detection must be based only on style and tone — not on absence of reference.
Style clues: overly fluent, repetitive, generic, no personal insight, unusually consistent phrasing.

Respond in this exact format:

OUTPUT:

- Plagiarism Type: Direct Copy / Paraphrased Copy / Original / N/A
- AI-Generated: Yes / No / Unsure
- AI Copy Type: Fully AI / AI-Paraphrased / Human
- Reason: [One short explanation]
- Instructor Note: [One short feedback sentence]

REFERENCE TEXT: NIL

SUBMISSION TEXT: In today's fast-changing world, technology is transforming industries faster than ever before.

OUTPUT:

- Plagiarism Type: Original
- AI-Generated: Unsure
- AI Copy Type: Human
- Reason: The submission text does not match any known sources and does not exhibit the style clues of AI generation.
- Instructor Note: The submission is original and well-written, showing a good understanding of the topic.

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

In recognition of the commitment to achieve
professional excellence



Kanishkaraj . R. P. R

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 18, 2025
Issued by: IBM SkillsBuild


Verify: <https://www.credly.com/badges/83f0ff53-3bac-4f0c-9bfb-38a93a1bb0bf>



IBM CERTIFICATIONS

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



THANK YOU