Elevate Labs AIML Internship 2025

[Project Phase]

AI DUNGEON STORY GENERATOR

Internship Project Report

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1. Introduction

As a 3rd-year Artificial Intelligence and Data Science student, this internship gave me the opportunity to explore real-world applications of AI in a creative field. I worked on the project **"AI Dungeon Story Generator"**, which uses a powerful AI model (GPT-2) to generate unique and interesting stories based on a short prompt given by the user. The user can also choose a **genre** like fantasy, sci-fi, or mystery, and the app will continue the story in that theme.

This project helped me apply the concepts I've learned in class—especially in **Natural Language Processing (NLP), AI model usage, prompt engineering, and deployment using Streamlit**.

2. Objective

The main objective of this project is to:

- Allow users to enter a **story prompt** of their choice
- Let them **select a genre** (fantasy, mystery, sci-fi, adventure)
- Generate **2 or 3 story continuations** using the GPT-2 AI model
- Show the results in a user-friendly web app
- Let the user **download the story** as a .txt file

This project is useful for understanding generative AI and building interactive applications using AI models.

3. Abstract

This project shows how **generative AI models** like GPT-2 can be used to create entertaining and creative story outputs. I used **Streamlit** to build a simple web interface where users can input a prompt and choose a genre. The app adds the genre to the prompt and sends it to the GPT-2 model to generate multiple outputs. The user can then read and even download their favourite story.

The app runs locally and doesn't require any dataset, as the GPT-2 model is already trained. The main learning focus of this project was on **prompt engineering, UI design, AI output handling, and integration of machine learning with frontend tools**.

4. Tools and Technologies Used

- **Python 3.10** – Core programming language
- **GPT-2 (from Hugging Face Transformers)** – For story generation
- **Streamlit** – Web interface for the app
- **PyTorch** – Backend AI framework
- **Textwrap, Random, OS** – Utility libraries for output handling
- **No dataset used** – Model generates story directly from user prompt

5. Steps Involved in Building the Project

1. Planned the project and decided features
2. Installed necessary Python libraries (transformers, torch, streamlit)
3. Loaded GPT-2 model from Hugging Face
4. Created genre-based prompts
5. Built Streamlit interface (input box, genre selector, display area)
6. Generated 2–3 story outputs based on prompt
7. Formatted and displayed outputs neatly in the app
8. Added **download button** to save story as .txt
9. Modularized code and tested various prompts
10. Finalized app, created README and project report, and uploaded to GitHub

6. Sample Prompt and Output

Prompt: "A scientist discovers a strange signal from deep space."
Genre: Sci-Fi

AI Generated Output:
“The signal wasn’t random. It repeated every 42 seconds, forming a pattern no one had seen before. As the scientist decoded it, a map of the galaxy appeared. It pointed toward a black hole — and something moving inside it…”

7. Challenges Faced

- GPT-2 is large and takes time to download or load for the first time
- Sometimes the model gives off-topic or illogical outputs
- Needed to format long texts properly for UI readability
- Understanding how to design **effective prompts** for better AI outputs

8. What I Learned

- How to **load and use GPT-2** from Hugging Face
- **Prompt engineering techniques** for better AI output control
- Creating simple **AI web apps** using Streamlit
- How to test AI outputs and improve them with parameters
- Gained confidence in handling AI tools for real-world use
- Learned how to prepare and document projects professionally for GitHub and interviews

9. Conclusion

This internship project gave me valuable hands-on experience in using AI for text generation and storytelling. As a 3rd-year AI & DS student, I found this project very helpful to understand NLP models, prompt design, and model-based app deployment. It also helped me improve problem-solving, project documentation, and confidence in working independently. This project will be a strong addition to my portfolio and something I can confidently explain during interviews.