Take-Home Assignment: AI Engineer

Reimagining a Classic in a New World

Great storytelling—like great product and problem design—lies in the ability to reinterpret timeless ideas in new environments without losing what makes them powerful.

In this exercise, you'll take a movie and transport it to an alternate world, preserving the essence that made it memorable while reimagining its plot, characters, and conflicts to fit a new setting or era.

Think of this like building a creative prototype of a familiar experience in an unfamiliar context — just as applied AI engineers reimagine real-world challenges for new systems.

Core Challenge: Build an AI system that can systematically transform narratives across contexts. Your solution should demonstrate:

- Prompt engineering for creative-yet-structured outputs
- System design for reproducible transformations
- Framework thinking: identifying reusable patterns
- Handling edge cases and maintaining consistency

Task

Choose a movie/literature and reimagine it entirely within a different universe — whether temporal, cultural, technological, or genre-based.

Source Material Options (should be public domain):

Classic Literature & Folklore:

- Shakespeare plays: Romeo & Juliet, Hamlet, Macbeth, The Tempest
- Fairy tales: Cinderella, Little Red Riding Hood, Beauty and the Beast, Hansel & Gretel
- Greek myths: Odysseus's journey, Pandora's Box, Icarus, Perseus and Medusa
- Indian myths: Ramayan, Mahabharat, shakuntalam etc.
- Classic novels: Dracula, Frankenstein, Jekyll & Hyde, Sherlock Holmes stories
- Folk legends: King Arthur, Robin Hood, Journey to the West (Monkey King)

Public Domain Films (pre-1929):

- Nosferatu (1922), Metropolis (1927), The Phantom of the Opera (1925)
- Buster Keaton comedies: The General (1926), Sherlock Jr. (1924)

Example transformations:

- Romeo & Juliet reimagined as rival AI research labs
- Odysseus's journey as a space exploration mission
- Dracula/Vampires in Silicon Valley

Your output should show both creativity and systematic reasoning — demonstrating how you preserved narrative integrity while reengineering context.

Deliverables

1. Reimagined Story (2-3 pages total):

- A reimagined story that is an output of your solution. Also, if there is any relevant intermediate information that helped create this story, please include it here.

2. Codebase:

- End-to-end runnable system (run.py or notebook) that can generate the full output from user input
- Must demonstrate prompt design, chaining, and retrieval or knowledge integration where relevant
- Include a small local dataset (or mock data) for movie metadata if needed
- Focus on working demo, not production-ready code

3. Solution Documentation (2 pages combining):

- **Approach Diagram:** Visual showing your pipeline (input parsing → prompt design → transformation logic → generation → assembly → output)
- **Solution Design:** How the system works end-to-end
- **Alternatives Considered:** e.g., fully prompt-based vs. structured pipeline, few-shot prompting approaches
- **Challenges & Mitigations:** How you handled coherence, consistency, reproducibility
- **Future Improvements:** How this could scale into a full product or API

Rules & Guardrails

- **Legal compliance:** Use only public domain films OR create your own fictional source material
- **No copyrighted content:** Avoid direct copy-paste dialogue or copyrighted text — use reinterpretation

- **Maintain thematic fidelity:** The emotional or moral essence must remain recognizable
- **Cultural sensitivity:** Avoid stereotypical or disrespectful portrayals
- **Balance imagination with logic:** The new world should have coherent internal rules
- **Avoid deus ex machina:** Resolutions should respect the world's logic
- **Show process:** Explicitly describe your transformation framework

Evaluation Criteria

We'll evaluate:

1. **System thinking:** How well you abstract and framework the transformation process
2. **Technical execution:** Clean, modular code that could scale to other movies
3. **AI engineering:** Effective prompt design, chaining, and output control
4. **Problem decomposition:** Breaking complex creative tasks into manageable components
5. **Bias toward action:** Did you ship a working demo?
6. **Ownership:** Did you add one clever idea we didn't ask for?

Time Expectation

You have 5 days from receiving this assignment to submit it. However, we encourage you to submit it as soon as possible. If you need more time, please let us know. We recommend dedicating no more than 6-8 hours to the task during this period. We prioritize thoughtful, quality work over the amount of output. Be selective with the scope—focus on creating a simple, functional system with one strong, creative decision, rather than trying to build something overly complex.

Submission: When submitting, please ensure that your work reflects your personal problem-solving approach rather than AI-generated content. We employ automated detection systems that will flag submissions relying on pre-built or wholesale LLM outputs.