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

This assignment should take approximately 8 hours. We value quality of thinking over quantity of output. (Be ruthless about scope. Focus on a simple, working system with one thoughtful creative choice rather than trying to build something comprehensive.)

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.