

## **Assignment 06: Assignment and Practice of Prompt Engineering**

### **Task 1: Prompt Categorization**

**"Generate a logo for a tech startup using neon colors."**

- **Type:** Visual Prompt
- **Reasoning:** It asks for a *design output (logo)* with visual constraints (tech theme, neon colors).

**"Explain blockchain to a 5-year-old."**

- **Type:** Instructional Prompt
- **Reasoning:** Direct instruction to simplify a technical concept for a specific audience (a child).

**"You are a UX designer. Suggest improvements to this app layout."**

- **Type:** Role-based Instructional Prompt (can also be conversational if discussed further)
- **Reasoning:** Uses role framing ("You are a UX designer") and asks for expert suggestions.

### **Task 2: Refinement Practice**

**Original:** "Make a poster."

**Refined:** "Create a poster for a school science fair with a blue background, cartoon robots, and bold text saying *SCIENCE EXPO 2025*."

**Original:** "Write a story."

**Refined:** "Write a short fantasy story (300–400 words) about a young girl who discovers a hidden portal in her garden, narrated in a magical and adventurous tone."

**Original:** "Draw a car."

**Refined:** "Generate a 3D illustration of a futuristic electric car with glowing headlights, metallic silver body, and a cyberpunk city background."

**Original:** "Explain photosynthesis."

**Refined:** "Explain photosynthesis in simple words for middle school students, using a step-by-step process and a diagrammatic example."

**Original:** "Make a video."

**Refined:** "Create a 30-second animated video showing how rainwater harvesting works, with text overlays and upbeat background music."

### **Task 3: Prompt Design Exercise**

#### **For ChatGPT (text-based)**

*Prompt:* "Act as a career counselor and suggest 3 suitable job roles for a computer science graduate interested in AI and music. Explain why each role fits."

#### **For DALL·E (image-based)**

*Prompt:* "A surreal painting of an astronaut playing guitar on the moon, with Earth glowing in the background, neon colors, and dreamy lighting."

#### **For SORA (video-based)**

*Prompt:* "Generate a cinematic 20-second video of a futuristic Tokyo street at night, with neon billboards, flying cars, and people in cyberpunk outfits walking in slow motion."

#### **For Coding/Logic**

*Prompt:* "Write a Python function that checks whether a given string is a palindrome, ignoring spaces and capitalization."

## **For Education/Training**

*Prompt:* "Design a 10-question multiple-choice quiz on Digital Marketing basics for undergraduate students, with correct answers highlighted at the end."

## **Practice Activity (Live Testing)**

**ChatGPT (text/logic):** Successfully tested text-based and coding prompts; results aligned with requirements.

*Prompt:* "Act as a career counselor and suggest 3 suitable job roles for a computer science graduate interested in AI and music. Explain why each role fits."

## **Career Counseling – AI + Music Pathways**

### **1. AI Music Engineer / Creative AI Developer**

- **Why it fits:** Combines your computer science background (machine learning, coding, data structures) with your passion for music. You'd work on building AI models that compose music, assist artists in production, or enhance music recommendation systems (like Spotify, Apple Music).
- **Example roles:** AI Audio Engineer, Music Generation Researcher, AI Music App Developer.
- **Future scope:** Growing demand for AI-powered tools in the music industry (auto-composition, mixing, personalized playlists).

### **2. Audio Signal Processing & Machine Learning Specialist**

- **Why it fits:** Focuses on the technical side of sound—analyzing, modifying, and improving audio signals using algorithms. If you enjoy the "science behind sound," this role links your CS knowledge with digital signal processing (DSP).
- **Example roles:** Speech & Audio ML Engineer, Acoustic AI Developer, Audio Software Engineer.
- **Future scope:** Applications in voice assistants (Alexa, Siri), music editing software, sound recognition, and even healthcare (diagnosing voice/throat issues).

### **3. AI-Powered Music Tech Entrepreneur / Product Manager**

- **Why it fits:** If you're also entrepreneurial, you could create platforms at the intersection of AI and music—like apps for smart songwriting, AI-driven practice tools for musicians, or platforms for personalized learning.
- **Example roles:** Startup Founder, Music Tech Product Manager, Innovation Specialist.
- **Future scope:** Music-tech is a booming space, and professionals who understand both *technology* and *art* have a unique edge.

**DALL·E (image):**

*Prompt: "A surreal painting of an astronaut playing guitar on the moon, with Earth glowing in the background, neon colors, and dreamy lighting."*

