

# **ACTIVITY 1: CROSS-PLATFORM PROMPT BENCHMARKING LAB**

**OBJECTIVE:** COMPARE HOW DIFFERENT AI MODELS GENERATE CODING SOLUTIONS.

**Prompt (Use EXACT same prompt everywhere)**

Act as a Senior Software Engineer.

Write a clean and optimized JavaScript function to:

- Remove duplicates from an array
- Preserve original order
- Handle edge cases (null, empty array)
- Add comments
- Include time complexity explanation

Return only the code.

## RUN THIS PROMPT ON:

- ChatGPT
- Gemini
- Claude
- Perplexity
- grok AI

## EVALUATE:

Platform	Code Cleanliness	Comments	Edge Cases	Optimization	Time Complexity Explained

## LEARNING:

- **Code generation quality differs**
- **Some models ignore constraints**
- **Some models over-explain**
- **Prompt precision matters**

## **ACTIVITY 2: WEB DEVELOPMENT UI GENERATION CHALLENGE**

**OBJECTIVE:** LEARN HOW DETAILED PROMPTS IMPROVE UI OUTPUT.

### **Basic Prompt**

**Create a login page in HTML and CSS.**

# Prompt (Use EXACT same prompt everywhere)

Act as a Senior Frontend Developer.

Create a modern responsive login page using:

- HTML5
- CSS3
- Flexbox
- Clean typography
- Soft shadow effects
- Mobile responsiveness
- Proper form validation

Constraints:

- Clean and production-ready structure
- Separate CSS section
- Professional UI
- No external frameworks

**Test on:**

- ChatGPT
- Gemini
- Claude

**Compare:**

- Which UI looks more professional?
- Which followed “no frameworks”?
- Which added responsiveness?
- Which gave better structure?

**1. More detail = better UI**

**2. AI can act like a senior developer**

**3. Prompting controls design quality**

## **ACTIVITY 3: RESUME ENGINEERING WITH AI (CAREER-FOCUSED)**

**OBJECTIVE:** LEARN HOW TO CREATE PLACEMENT-READY RESUMES USING AI.

### **Basic Prompt**

**Create my resume.**

# Advanced Resume Prompt

Act as a professional resume writer.

Create a one-page ATS-friendly resume for:

- First year B.Tech student
- Skills: C++, HTML, CSS, JavaScript
- Projects: Portfolio Website, Calculator App
- Goal: Web Developer Internship

Include:

- Professional summary
- Skills section
- Projects with bullet impact points
- Clean formatting
- Strong action verbs
- ATS optimized keywords
- No unnecessary graphics

Output in clean markdown format.

**Test on:**

- **ChatGPT**
- **Gemini**
- **Claude**

**Compare:**

- **Which resume looks more professional?**
- **Which used strong action verbs?**
- **Which optimized for ATS?**
- **Which followed one-page rule?**

**1. Resume prompting = career advantage**

**2. AI can enhance presentation**

**3. Structured input gives better results**

## **ACTIVITY 4: PROMPT ENGINEERING FOR PORTFOLIO PROJECTS**

**OBJECTIVE:** USE AI TO IMPROVE EXISTING CODING PROJECTS.

**Prompt (Use EXACT same prompt everywhere)**

Act as a Senior Software Architect.

Improve this project idea:

"A basic to-do list web app."

Enhance it by:

- Adding advanced features
- Suggesting scalability improvements
- Adding authentication idea
- Suggesting database structure
- Making it portfolio-worthy

Provide structured output.

**Test on:**

- ChatGPT
- Gemini
- Claude

**Ask:**

- Which AI suggested better scalability?
- Which gave industry-like features?
- Which was more practical?

**Learning Outcome:**

- AI can upgrade simple ideas
- Prompting helps think like an architect
- AI can act as mentor

# Ask: Yourself

- Which platform felt most developer-friendly?
- Did any AI ignore constraints?
- How can prompt engineering help in placements?
- Can AI replace developers or enhance them?