

Facilitators: Hannah Farias, Jordan Buechler
Location: South Padre Room
Software: ChatGPT: <https://chatgpt.com/>
 Base44: <https://app.base44.com/>



AI APP CREATION

Introduction to AI App Creation: This session will guide participants as they utilize AI tools to build custom apps to perform common tasks for maintenance personnel or energy managers, such as conducting a compressed air leak survey, tracking steam boiler blowdown measurements, etc.

INTRODUCTION TO AI APP CREATION - BASIC INFORMATION AND INSTRUCTIONS

TOOLS WE WILL USE

Prompt Generation:



ChatGPT

<https://chatgpt.com>

App Creation:



Base44

<https://app.base44.com>

OTHER TOOLS

Prompt Generation:

Gemini
Claude
Grok
CoPilot

App Creation:

Lovable
Glide
Claude (vibe-coding)

AI IS A TOOL NOT A REPLACEMENT

When using these tools, always
use your engineering judgement



Disclaimer: The Gulf Coast Center of Excellence and DOE do not endorse or advocate the use of any one AI tool over another or take responsibility for their misuse

THE RICECO PROMPTING FRAMEWORK

Use this structure to build effective prompts

Note: You don't need to use every letter every time, but the more specific you are, the more useful the response



TIP: Don't worry about getting it perfect. This is about experimenting and learning what works!

R

ROLE

Tell the AI who it should act as.

I

INSTRUCTION

Include the specific task or command

C

CONTEXT

Provide essential background or references.

E

EXAMPLES

Provide examples to show, not just tell what you want

C

CONSTRAINT

Set clear limits and rules (tone, length, etc.).

O

OUTPUT

Choose the specific format (list, essay, code).

Example Prompt

You are an AI prompt engineer with expertise in using Base44. Build a prompt to create an app that can be used to track leaks in a compressed air system. This app will be used by a maintenance team in an industrial facility doing regular check-ups using mobile phones. Include an approximate leakage rate using the equations from the calculator found at: <http://toolbox.tlv.com/global/US/calculator/air-flow-rate-through-orifice.html>. For each leak entered into the system, include a status (identified, repairs scheduled, or repaired), a geotag, date, name of tagger, and how much money was saved. Add any other features that might be helpful for leak management in Base44 prompt format.

HANDS ON APP BUILDING: STEP BY STEP INSTRUCTIONS

The following instructions were created specifically for the IETC 2026 Hands-On AI Workshop, where ChatGPT and Base44 were used, but they can be adapted for any AI Tool

1

Create Your Accounts

- ☐ Create a free account with [ChatGPT](#)
- ☐ Create a free account with [Base44](#)

2

Explore the Problem

- ☐ Use the blank space below to brainstorm. Consider: app functionality, audience, critical data, needs, etc.

Build the Prompt

- ☐ **R** **ROLE**
- ☐ **I** **INSTRUCTION**
- ☐ **C** **CONTEXT**
- ☐ **E** **EXAMPLES**
- ☐ **C** **CONSTRAINT**
- ☐ **O** **OUTPUT**

4

Generate the App

- ☐ Type your prompt into ChatGPT
- ☐ Copy the prompt that ChatGPT generates
- ☐ Paste the generated prompt into Base44

5

Explore the App

- ☐ Test app functionality
- ☐ Make edits as necessary
- ☐ Deploy the app

What would you like to change?

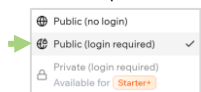
Note: To edit the app, use discussion box on the bottom left side of the screen

⚙️ + Discuss 📄 ➔

Deployment Options

Privacy

Three options:



Default: anyone with a Base44 account has access to your app

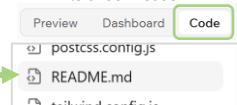
Mobile/Web App

Recommended: Web App
To add your web app to your phone home screen:

1. Navigate to your app's URL
2. Select "Share" (iPhone) or "Menu" (Android)
3. Select "Add to home screen"

Run Locally

Instructions in "README.md" file under "Code"



EXPLORATION TIPS

Best Practices

Keep Data Secure

- Don't use real data during app development
- Check generated code
- Consider paying for plans that ensure data and app security

Conserve Tokens

- Be aware of "token" limitations
- Use other AI software simultaneously for prompt generation, logos, etc.

Exploration Ideas

Not sure where to start?

Try one of these scenarios:



Air Leak Tracker

Create an app that can keep a log of compressed air leaks in your facility. Consider:

- Location
- Cost Calculations
- Severity Ranking



Equipment Log

Convert a manual equipment maintenance or setpoint log to app format. Consider:

- Logbook for Data Entry
- Graphical Representations
- Notifications



Inventory System

Create an inventory tracking system. Consider:

- Images
- Labels and Locations
- Purchasing Information
- Categorization



For workshop materials, energy saving tips, and more, visit our website at <https://gccoe.org>