PATHAHEAD · FREE ROADMAP

Become a Prompt Engineer / GenAI Specialist from Scratch

The newest skill in tech — talk to AI so well it does real work. Go from casual ChatGPT user to building AI-powered tools in about four months, no degree required.

16	5	4	₹0
weeks · ~8–10 hrs/wk	portfolio projects	phases · user to builder	free AI tools only

A free PathAhead learning resource · adjust the pace to your life — the order matters more than the dates.

THE ONE RULE

Prompt → test → iterate

Prompting is an experimental skill, not a magic-words game. Keep a prompt journal: write a prompt, score the output, change one thing, run it again. Every project below ships with the prompts that power it.

> **Legal & ethical use only.** Prompt engineering is strongest as a multiplier: pair it with a domain you care about — coding, content, data, research — and you become the person who gets 10× more out of AI than everyone around you.

THE ROADMAP

Four phases, step by step

0 Foundations

Weeks 1–3

Understand what LLMs actually are — and how to steer them.

WEEK 1

How LLMs work

Tokens, context windows, temperature, why models hallucinate.

WEEK 2

The core patterns

Zero-shot, few-shot examples, role prompting, output formats.

WEEK 3

The model landscape

ChatGPT, Claude, Gemini — strengths, limits, free tiers.

1 Advanced Prompting

Weeks 4–7

The techniques that separate pros from casual users.

WEEK 4

Reasoning prompts

Chain-of-thought, step decomposition, self-critique.

WEEK 5

Structured output

Force clean JSON, tables, and schemas from any model.

WEEK 6

System prompts & personas

Build reliable assistants with tone and guardrails.

WEEK 7 · PROJECT ▶

Prompt library

A tested, documented library of 25+ reusable prompts.

2 Building with AI

Weeks 8–12

Go beyond the chat box — call models from code and tools.

WEEK 8
Playgrounds & APIs
OpenAI Playground, Google AI Studio, API keys and params.

WEEK 9
Python for AI calls
Just enough Python to call an LLM API and parse results.

WEEK 10
RAG basics
Embeddings and retrieval — make AI answer from YOUR data.

WEEK 11
Agents & tool use
Function calling, multi-step AI workflows, automation.

WEEK 12 · PROJECT ▶
AI assistant
A custom assistant that answers from documents you give it.

3 Applied GenAI

Weeks 13–16

Multimodal AI, ethics, and a portfolio that proves it.

WEEK 13
Images & multimodal
Image generation and vision prompts done professionally.

WEEK 14
Evaluation & safety
Test prompts systematically; bias, misuse, and limits.

WEEK 15
Domain playbooks
Apply GenAI to study, content, code, and research workflows.

WEEK 16 · CAPSTONE ▶
AI-powered product
Ship a complete AI tool with documented prompt design.

BUILD A PORTFOLIO

Five projects that get you hired

Projects beat certificates. Do them in order — each builds on the last. Put every one on GitHub with a clear README: problem → approach → result.

Start here

1 · Prompt Library

25+ tested prompts for study, writing, and coding — with before/after outputs.

Personas

2 · Custom AI Study Buddy

A system-prompted assistant that teaches your syllabus, step by step.

Structured

3 · Data Extractor

Turn messy text into clean JSON/tables reliably — the #1 business use case.

In demand

4 · RAG Document Assistant

An assistant that answers questions from your own notes or PDFs.

Capstone

5 · AI-Powered Tool

A complete working AI product — prompts, code, and a writeup of the design.

ROLES YOU CAN APPLY FOR

Prompt Engineer · GenAI Specialist · AI Automation Builder · AI Content Strategist

TYPICAL STARTING SALARY · INDIA

₹4–12 LPA

LEARN IT

Learning resources

Every item links to the real source (clickable in this PDF).

BOOKS

- The Art of Prompt Engineering by Nathan Hunter
- Co-Intelligence by Ethan Mollick
- Prompt Engineering for Generative AI by James Phoenix and Mike Taylor

COURSES

- ChatGPT Prompt Engineering for Developers (DeepLearning.AI)
- Google Prompting Essentials (Coursera)
- Anthropic Prompt Engineering Interactive Tutorial (GitHub)
- Generative AI for Everyone (Coursera)

YOUTUBE

- AI Explained
- Matt Wolfe
- freeCodeCamp Prompt Engineering course
- Fireship

PRACTICE

- OpenAI Playground
- Google AI Studio
- Anthropic Console
- Hugging Face Spaces
- GitHub

DO THIS TODAY

Your first step (takes 30 minutes)

1

Create free AI accounts

ChatGPT, Claude, and Google AI Studio — three free tiers, three different brains.

2

Do one guided tutorial

Anthropic's free interactive prompt-engineering tutorial teaches the real patterns.

3

Rewrite one prompt 5 times

Take a prompt you use, improve it five times, note what changed. You've started.

Job-ready checklist: 3–5 solid projects on GitHub (≥1 deployed or documented) · can explain your work in an interview · comfortable with the core tools of the field · a portfolio or profile recruiters can find.

PathAhead — India's premium career guidance platform. This roadmap is a free educational resource; timelines are a guide and everyone learns at a different pace. Referenced third-party resources (DeepLearning.AI short courses, Anthropic prompt tutorial, Google Prompting Essentials, OpenAI Playground, Hugging Face) are for learning only and are not affiliated with PathAhead.