

Related Roadmaps

✓ AI Engineer

✓ AI and Data Scientist

✓ MLOps Roadmap

✓ AI Red Teaming

✓ Prompt Engineering

Find the interactive version of this roadmap and more at

roadmap.sh

Common Terminology

LLM

Tokens

Context Window

Hallucination

Agents

Prompt Injection

Model Weights / Parameters

Fine-Tuning vs Prompt Engg.

AI vs AGI

RAG

Introduction

LLMs and how they work?

What is a Prompt?

What is Prompt Engineering?

Models offered by ____

OpenAI

Google

Anthropic

Meta

xAI

LLM Configuration

Sampling Parameters

Temperature

Top-K

Top-P

Output Control

Max Tokens

Stop Sequences

Structured Outputs

Repetition Penalties

Frequency Penalty

Presence Penalty

Prompting Techniques

Zero-Shot Prompting

One-Shot / Few-Shot Prompting

System / Role / Contextual

System Prompting

Role Prompting

Contextual Prompting

Step-back Prompting

Chain of Thought (CoT) Prompting

Self-Consistency Prompting

Tree of Thoughts (ToT) Prompting

ReAct Prompting

Automatic Prompt Engineering

Use LLM to generate Prompts

Prompting Best Practices

AI Red Teaming

AI Red Teaming Roadmap

— Provide few-shot examples for structure or output style you need

— Keep your prompts short and concise

— Ask for structured output if it helps e.g. JSON, XML, Markdown, CSV etc

— Use variables / placeholders in your prompts for easier configuration

— Prioritize giving clearer instructions over adding constraints

— Control the maximum output length

— Experiment with input formats and writing styles

— Tune sampling (temperature, top-k, top-p) for determinism vs creativity

— Guard against prompt injection; sanitize user text

— Automate evaluation; integrate unit tests for outputs

— Document and track prompt versions

— Optimize for latency & cost in production pipelines

— Document decisions, failures, and learnings for future devs

— Delimit different sections with triple backticks or XML tags

Improving Reliability

Prompt Debiasing

Prompt Ensembling

LLM Self Evaluation

Calibrating LLMs

Continue learning with following roadmaps

AI Engineer Roadmap

AI Agents Roadmap