



# REDSPECTOR CERTIFIED PROMPT ENGINEERING PROFESSIONAL

// RCPE — AI & LLM PROMPT ENGINEERING

## Master Prompt Engineering.

Become a skilled AI Prompt Engineer through hands-on practical training, industry-standard methodologies, real-world use-case simulations, and professional AI workflow design — across the world's leading language models.

```
redspector ~$optimize_prompt --role "senior analyst" --task "quarterly report"  
--format structured
```

```
> output: reliable, reusable, production-ready prompt generated.
```

**ENROLL TODAY**

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"BEYOND CERTIFICATIONS. TOWARD EXPERTISE"

ABOUT THE PROGRAM

# Course Overview

TheRedspectorCertifiedPromptEngineering Professional (RCPE) program is designed to build strong foundations in prompt engineering and applied AI. Students learn how to construct, optimize, and secure prompts across leading LLMs, translating real business, engineering, and research problems into reliable, repeatable AI-driven outcomes.

<b>24</b> Modules	<b>08</b> CAPSTONE PROJECTS	<b>08</b> MASTERY MODULES	<b>01</b> INDUSTRY CERTIFICATION
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## Who Should Join?

<b>Software &amp; Product Engineers</b>	<b>Marketers &amp; Business Teams</b>	<b>Cybersecurity Professionals</b>
<b>Freelancers &amp; Consultants</b>	<b>Students &amp; Graduates</b> Early-career learners seeking a certified, job-ready foundation in applied AI.	<b>Founders &amp; Product Leads</b> Entrepreneurs and technical leads architecting AI-powered SaaS products and startups.

## LEARNING JOURNEY

# Learning Path

A structured, five-stage progression from fundamentals to production.

**01****FOUNDATIONS**

AI, LLM & core prompting basics

**02****ADVANCED SKILLS**

Reasoning, context & agentic systems

**03****SECURITY**

Prompt defense & AI red teaming

**04****SYSTEMS**

RAG, MCP & enterprise architecture

**05****CAPSTONE**

Ship real, production-grade AI builds

## PROGRAM CURRICULUM

# Modules 01-04

Comprehensive, hands-on training across the full prompt engineering stack.

## MOD 01 AI & LLM FUNDAMENTALS

- What is AI?
- Generative AI vs Traditional AI
- How LLMs work
- Tokens, Context Window, Temperature
- GPT, Claude, Gemini, DeepSeek, Qwen, Llama

## MOD 02 PROMPT ENGINEERING BASICS

- Structure of a Prompt
- Role Prompting
- Context Engineering
- Output Formatting
- Few-Shot Prompting
- Zero-Shot Prompting
- Chain-of-Thought Prompting

## MOD 03 ADVANCED PROMPT ENGINEERING

- Multi-Step Prompting
- Self-Consistency
- ReAct Framework
- Tree of Thoughts
- Reflection Prompting
- Agentic Prompting
- Prompt Chaining
- Meta Prompting

## MOD 04 AI FOR BUSINESS

- Marketing Content Generation
- Sales Automation
- Email Generation
- Customer Support Bots
- Proposal Writing
- Report Generation

## PROGRAM CURRICULUM

# Modules 05–08

Comprehensive, hands-on training across the full prompt engineering stack.

## MOD 05 AI FOR DEVELOPERS

- Code Generation
- Debugging
- Documentation Creation
- Code Review
- API Documentation
- GitHub Copilot Workflows

## MOD 06 AI AUTOMATION

- AI Agents
- Workflow Automation
- No-Code AI Tools
- AI + WhatsApp
- AI + CRM
- AI + Web Applications

## MOD 07 PROMPT SECURITY

- Prompt Injection
- Jailbreak Attacks
- Data Leakage
- AI Security Risks
- Secure Prompt Design
- AI Governance

## MOD 08 ADVANCED AI SYSTEMS

- RAG (Retrieval Augmented Generation)
- Vector Databases
- Embeddings
- Memory Systems
- Tool Calling
- MCP (Model Context Protocol)
- Multi-Agent Systems

## PROGRAM CURRICULUM

# Modules 09–12

Comprehensive, hands-on training across the full prompt engineering stack.

## MOD 09 BUILDING AI PRODUCTS

- AI SaaS Development
- AI Startup Ideas
- AI Product Design
- Pricing AI Services
- Client Acquisition
- AI Consulting

## MOD 10 CAPSTONE PROJECTS

- AI Chatbot
- AI Content Generator
- AI Research Assistant
- AI Coding Assistant
- AI Business Automation Agent

## MOD 11 COGNITIVE PROMPT ENGINEERING

- Cognitive Architecture Design
- Human Reasoning Simulation
- Expert Persona Engineering
- Dynamic Role Switching
- Multi-Perspective Analysis
- Decision Tree Prompting
- Critical Thinking Frameworks
- Recursive Reasoning

## MOD 12 AGENTIC AI ENGINEERING

- Autonomous AI Agents
- Goal-Oriented Agents
- Planning & Execution Systems
- Multi-Agent Collaboration
- Task Decomposition
- Agent Memory Management
- Agent Communication Protocols
- Autonomous Workflow Design

## PROGRAM CURRICULUM

# Modules 13–16

Comprehensive, hands-on training across the full prompt engineering stack.

**MOD 13** CONTEXT ENGINEERING

- Context Window Optimization
- Long-Context Management
- Dynamic Context Injection
- Knowledge Compression
- Context Prioritization
- Semantic Context Mapping
- Retrieval Optimization
- Context-Aware Response Design

**MOD 14** ADVANCED REASONING SYSTEMS

- Chain of Thought (CoT)
- Tree of Thoughts (ToT)
- Graph of Thoughts (GoT)
- Self-Reflection Techniques
- Self-Correction Systems
- Debate Frameworks
- Reasoning Verification
- Logic Validation

**MOD 15** AI SECURITY & DEFENSE

- Prompt Injection Attacks
- Indirect Prompt Injection
- Jailbreak Techniques
- Context Poisoning
- Data Leakage Prevention
- LLM Threat Modeling
- Secure Prompt Architecture
- AI Red Teaming
- AI Risk Assessment
- OWASP Top 10 for LLMs

**MOD 16** RETRIEVAL-AUGMENTED GENERATION (RAG)

- RAG Architecture
- Embedding Models
- Chunking Strategies
- Vector Databases
- Hybrid Search
- Semantic Search
- Knowledge Base Engineering
- RAG Evaluation
- Production RAG Systems

## PROGRAM CURRICULUM

# Modules 17–20

Comprehensive, hands-on training across the full prompt engineering stack.

**MOD 17 MCP (MODEL CONTEXT PROTOCOL)**

- MCP Fundamentals
- MCP Server Development
- Tool Integration
- External Data Sources
- API Connectivity
- Authentication Systems
- Enterprise MCP Design
- Secure MCP Deployment

**MOD 18 AI AUTOMATION ENGINEERING**

- Workflow Automation
- Business Process Automation
- AI-Powered Operations
- Email Automation
- CRM Automation
- AI Workflow Orchestration
- Enterprise Automation Systems
- Event-Driven Automation

**MOD 19 LLM APPLICATION DEVELOPMENT**

- AI SaaS Development
- AI Web Applications
- AI API Integration
- Chatbot Engineering
- Enterprise AI Solutions
- Multi-Model Architectures
- Production Deployment
- Monitoring & Logging

**MOD 20 ADVANCED PROMPT FRAMEWORKS**

- ReAct Framework
- Reflexion Framework Chain-of-Verification
- DSPy Fundamentals
- Meta Prompting
- Constitutional AI Principles
- Program-Aided Language Models
- Structured Prompt Pipelines

## PROGRAM CURRICULUM

# Modules 21-24

Comprehensive, hands-on training across the full prompt engineering stack.

**MOD 21 AI RED TEAMING**

- Adversarial Testing
- Jailbreak Discovery
- Prompt Attack Simulation
- Security Evaluation
- Safety Benchmarking
- Risk Assessment Reports
- AI Penetration Testing Concepts
- Defensive Controls

**MOD 22 AI PRODUCT ENGINEERING**

- AI Product Design
- AI Startup Architecture
- Cost Optimization
- Model Selection Strategy
- Scaling AI Systems
- AI Monetization Models
- Enterprise AI Consulting
- AI Product Management

**MOD 23 LOCAL LLM ENGINEERING**

- Ollama Advanced Setup
- Open-Weight Models
- Quantization
- GPU Optimization
- Fine-Tuning Fundamentals
- Model Serving
- Local AI Security
- Offline AI Systems

**MOD 24 ENTERPRISE AI ARCHITECTURE**

- AI Infrastructure Design
- Multi-Model Systems
- AI Governance
- Compliance Frameworks
- Enterprise Security
- High Availability AI Systems
- Distributed AI Architecture
- AI Operations (AIOps)

## APPLIED LEARNING

# Final Capstone & Bonus Tracks

Eight production capstones and eight mastery modules to complete certification.

## FINAL CAPSTONE PROJECTS

- 01 Enterprise AI Research Assistant
- 02 Multi-Agent Business Automation Platform
- 03 Secure RAG Knowledge Management System
- 04 AI Customer Support Agent
- 05 Local Private AI Assistant using Ollama
- 06 AI Security Assessment Framework
- 07 Enterprise MCP Server
- 08 Production-Ready AI SaaS Application

## BONUS MASTERY MODULES

- 01 ChatGPT Mastery
- 02 Claude Mastery
- 03 Gemini Mastery
- 04 DeepSeek Mastery
- 05 Perplexity AI
- 06 Cursor AI
- 07 VS Code AI Workflow
- 08 Local AI using Ollama

```
redspector ~$ build --capstone "enterprise-mcp-server" --deploy production
```

```
> status: certification requirements met. RCPE eligible.
```

CERTIFICATION

# Benefits, Value & Contact

Industry-ready credential built for career advancement.

## CERTIFICATION BENEFITS

- Professional RCPE Certification
- Advancement Through AI Prompting Skills
- Professional Reporting Skills
- Career Advancement Opportunities

## WHY REDSPECTOR?

- Industry-Focused Training
- Practical Learning Approach
- Expert-Led Curriculum
- Real-World Methodologies
- Career-Oriented Skill Development
- Professional Certification Program

## CONTACT US

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