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Mastering Prompt Engineering

A Guide to Crafting Effective Prompts

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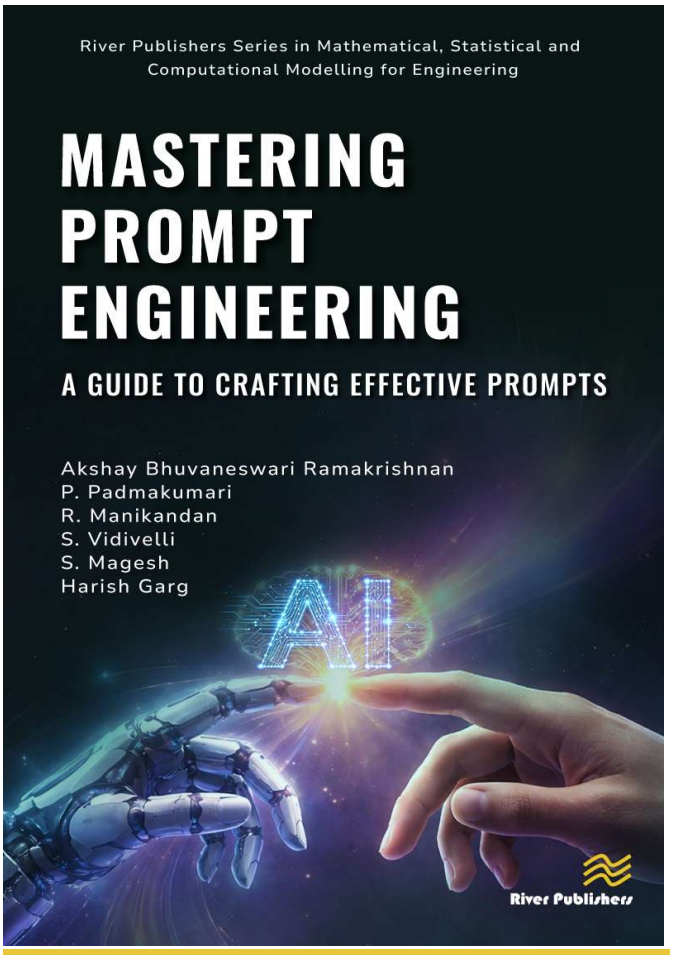
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This book explains the principles, structure, and real-world practice of prompt engineering in a way that anyone working with large language models can understand and apply. Rather than treating prompting as a collection of hacks, it walks the reader through how to think about role, context, task, constraints, and examples so that LLMs produce reliable, domain-appropriate outputs. Starting from the basics of "what is a prompt," the book then connects prompting to how generative AI models actually work, introduces core and advanced prompting patterns (prompt chaining, dynamic templates, tool-augmented prompting), and shows how to evaluate and refine model responses.

Designed for students, educators, and practitioners, each chapter includes learning objectives and hands-on exercises that can be tried directly in tools like ChatGPT. Later chapters move from theory to application, demonstrating how to build LLM-powered chatbots and retrieval-augmented generation (RAG) systems, and how to incorporate ethics, safety, and bias awareness into prompt design. By the end, readers will have a reusable toolkit for crafting effective prompts across education, research, business, and technical use cases.

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Prompt engineering; large language models; generative AI; ChatGPT; prompt design; prompt chaining; retrieval-augmented generation (RAG); AI in education; NLP applications; AI ethics; LLM evaluation; applied artificial intelligence

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