

PREFACE

This book is designed to equip you with the knowledge and skills necessary to navigate the dynamic intersection of web development and artificial intelligence (AI). We focus on various aspects of modern web development and AI technologies, with a particular emphasis on Generative AI, CSS3, SVG, JavaScript, HTML, and popular web features like 3D animations and gradients. By exploring these topics, readers will gain a deeper understanding of how AI can enhance web development processes and how to leverage AI models like GPT-4 to streamline development workflows.

INTENDED AUDIENCE

Whether you are a seasoned web developer looking to stay ahead in the AI-focused world or a beginner eager to explore the possibilities of AI-driven web development, this book is for you. Web developers, UI/UX designers, and software engineers seeking to blend traditional web development skills with the latest AI technologies will find this book to be a valuable resource.

CHAPTER SUMMARIES

Chapter 1: Generative AI and GPT-4: We introduce Generative AI, exploring its key features, applications, and prominent players like DeepMind and OpenAI. Additionally, we introduce ChatGPT, discussing its strengths, weaknesses, and its various versions.

Chapter 2: Prompt Engineering: Discussing the intricacies of prompt engineering, this chapter provides an in-depth overview of different prompt types, their importance, and guidelines for effective prompt design, essential for optimal interaction with AI models like GPT-4.

Chapter 3: Introduction to CSS3: Here, we lay the foundation of CSS3, covering

its features, browser support, and essential concepts like shadow effects, gradients, and 2D transforms. We also address security and accessibility concerns, ensuring a holistic understanding of CSS3 principles.

Chapter 4: CSS3 3D Animation: Building upon CSS3 fundamentals, this chapter explores advanced topics such as 3D animation effects, transitions, and media queries. Through practical examples, readers learn to create animations using CSS3 techniques.

Chapter 5: CSS3 and GPT-4: Focusing on the integration of CSS3 with GPT-4, this chapter contains an assortment of GPT-4 Web pages and demonstrates how GPT-4-generated code can enhance web design. Readers explore various CSS3 use cases, security considerations, and sample code.

Chapter 6: Scalable Vector Graphics (SVG): This chapter covers basic shapes, gradients, transformations, and animation techniques. Readers gain insights into leveraging SVG for creating dynamic and responsive visuals.

Chapter 7: SVG and GPT-4: Finally, we look at the synergy between SVG and GPT-4, highlighting their combined potential for web development. From linear gradients to complex animations, readers learn to harness the power of SVG alongside GPT-4-generated content.

KEY FEATURES OF THE BOOK:

- *Comprehensive Coverage:* From AI fundamentals to advanced CSS3 and SVG techniques, this book offers a comprehensive exploration of modern web development technologies.
- *Practical Insights:* With a balance of theoretical knowledge and practical examples, readers gain hands-on experience in implementing AI-driven design solutions using GPT-4-generated code.
- *Companion files:* Files with source code, datasets, and images from the book are available from the publisher for downloading (with proof of purchase)

WHAT DO I NEED TO KNOW?

The most useful prerequisite is some familiarity with another scripting language, such as HTML or JavaScript and a basic understanding of CSS3. The less technical knowledge that you have, the more diligence will be required in order to understand the various topics that are covered. If you want to be sure that you can grasp the material in this book, glance through some of the code samples to get an idea of what is familiar to you and what is new for you.

COMPANION FILES

Source code, datasets, and figures from the text are available for downloading (with proof of purchase) from the publisher by writing to info@merclearning.com.

ABOUT THE COVER

The cover image was generated using DALL-E with the following:

Prompt: “Please render a futuristic jet with a structure similar to a cubic Bezier.”

Response (with image):

“Here is the image of a futuristic jet inspired by a cubic Bezier with a smooth, flowing, design.”

As you explore the subjects of web development and AI, I encourage you to engage actively with the content, experiment with code samples, and embrace the opportunities that AI-driven web development presents. This book will guide you every step of the way.

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