

Glossary of Terms for GenAI in Front End Development

Generative AI (GenAI): A subset of artificial intelligence focused on generating new content, such as text, images, or code, based on the data it has been trained on.

UI/UX Design: User Interface (UI) and User Experience (UX) design involve creating intuitive and aesthetically pleasing interfaces that enhance the user interaction with a website or application.

Code Generation: The process of using AI tools like GitHub Copilot to automatically generate code snippets, completions, or entire functions based on natural language prompts.

Automated Testing: Using AI-driven tools to automatically test the functionality, performance, and security of web applications, reducing the need for manual testing and speeding up the debugging process.

Text Generation: AI's ability to create human-like text, which can be used for writing documentation, generating content for web pages, or creating code comments.

Image Generation: AI's capability to create images based on textual descriptions, which can be used for designing UI elements, graphics, and other visual content.

Data Synthesis: The generation of synthetic data that mimics real-world data, used for testing and training purposes to improve the robustness of applications.

Ethical AI: Practices that ensure AI development and usage align with ethical guidelines, promoting fairness, transparency, and accountability.

Bias Detection and Mitigation: Techniques used to identify and reduce biases in AI models to promote fairness and inclusivity in AI-generated content.

Human Oversight: Maintaining human control over AI processes to ensure that critical decisions are made by humans, not machines, to uphold ethical standards and accountability.

Responsive Design: A design approach that ensures web pages render well on a variety of devices and window or screen sizes, enhancing the user experience across different platforms.

Sketching: The initial phase of the design process where ideas are drawn on paper or a digital tool to outline the basic structure and layout of a web page.

HTML (HyperText Markup Language): The standard markup language used to create and structure content on the web.

CSS (Cascading Style Sheets): A style sheet language used to describe the presentation of a document written in HTML or XML, including layout, colors, and fonts.

JavaScript: A programming language commonly used in web development to create interactive effects within web browsers.

Selenium: An open-source tool used for automating web browsers, often utilized for testing web applications.

Privacy Regulations (e.g., GDPR, CCPA): Laws and guidelines designed to protect personal data and privacy of individuals, ensuring that data used in AI training is anonymized and compliant.

Mockups: Detailed static representations of a web page design, used to visualize and plan the layout, look, and feel of a site before development.

Design Iteration: The process of repeatedly refining and improving a design based on feedback and testing to achieve the best possible outcome.

Documentation: Comprehensive written descriptions of a project's development process, structure, and usage instructions, which are essential for maintaining and understanding the code.

Visual Studio Code (VS Code): A popular open-source code editor used by developers to write, debug, and test their code.

Functional Testing: A type of testing that verifies that each function of a software application operates in conformance with the requirement specification.

Cross-Browser Compatibility: Ensuring that a web application works consistently across different web browsers and versions.

Content Personalization: Using AI to dynamically generate personalized content for users based on their interactions and preferences to enhance their experience.

Design Mockups: High-fidelity representations of a web page, used to visualize the final product before development begins.

Version Control: A system that records changes to a file or set of files over time so that specific versions can be recalled later, commonly used in collaborative coding environments.