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Designing Smarter Interfaces with LLMs

Duration: 16 Hrs

Training Description:

This training empowers **UI/UX teams** to **integrate Generative AI (GenAI)** into design and user experience workflows, **leveraging Large Language Models (LLMs)** like Claude, GPT, Gemini, and other provider-agnostic AI tools. Participants will learn how to streamline design processes, prototyping, and user research by automating repetitive tasks and enabling more creative and intelligent interface designs. From idea generation to dynamic user testing, the course covers best practices, ethical considerations, and AI-powered tools for improving design efficiency and user satisfaction. The training focuses on hands-on practice and practical demos to ensure participants leave with actionable skills that can be implemented across cloud platforms such as AWS, Azure, or GCP.

Target Audience:

- Visual Designers, Product Designers, UX/UI Designers, UX Researchers, and Design Managers looking to augment their workflows with Generative AI technologies.
- Teams tasked with rapid prototyping, user interaction analysis, A/B testing, and creating dynamic, user-centered interfaces.
- Organizations seeking to adopt LLM-powered tools and best practices for UX design and interaction systems.

List of Tools, Frameworks, and Technologies Covered:

- **Generative AI Design Tools**: Figma, Sketch, Adobe Firefly, MidJourney for AI-based visual ideation and interface creation.
- **Prototyping Tools**: AI-integrated prototyping using Figma plugins and AI tools that generate user flows.
- **LLM Integration Tools**: APIs powered by GPT, Claude, Gemini, or other models for dynamic content.
- **User Research Automation Tools**: Typeform, UserTesting.com, and Google Forms enhanced with AI for qualitative data insights.
- **Usability and A/B Testing Optimization**: AI-based analysis for heatmaps, click tracking, and user engagement insights (e.g., Crazy Egg, Hotjar).
- **Code Integration for UI Components**: TailwindCSS, HTML/CSS, JavaScript frameworks for implementing AI-generative outputs.

What Participants Can Expect After Completing This Training:

1. Learn how to use Generative AI tools to ideate, prototype, and analyze design workflows.
2. Explore AI-assisted tools for creating dynamic and personalized interface designs, mockups, and wireframes.
3. Automate repetitive UI/UX tasks such as user research summaries, persona generation, and usability reports.
4. Integrate LLM-based APIs into dynamic interfaces for content generation or chat-like interactions within products.
5. Master best practices and ethical usage guidelines for incorporating AI-generated designs and interactions that prioritize user inclusivity and diversity.

Syllabus: Generative AI for UI/UX Teams

Module 1: Introduction to Generative AI in UI/UX (2 Hours)

Objective:
Understand how Generative AI and LLMs enhance UI/UX design processes, from ideation to usability testing.

Topics Covered:
1. Overview of Generative AI applications in UI/UX workflows: Ideation, research, prototyping, and user interactions.
2. Practical use cases of LLM-powered tools for interface design, user flow optimization, and rapid prototyping.
3. Introduction to AI's role in accessible and inclusive UX design.

Demo:
- Use a Generative AI platform (e.g., MidJourney or Adobe Firefly) to generate visual assets for a design project such as buttons, banners, or illustrations.

Hands-On Practice:
- Participants interact with an LLM-powered tool to produce AI-generated wireframes or UI element suggestions for a specific mockup (e.g., an e-commerce website).

Module 2: AI-Assisted Idea Generation and Prototyping (4 Hours)

Objective:

Streamline the process of brainstorming, creating mockups, and building high-fidelity prototypes using Generative AI.

Topics Covered:

1. Leveraging AI in Figma or other prototyping tools to generate mockups, layouts, and color schemes dynamically.
2. Creating user flows and journey maps using AI to simulate real-world interactions.
3. Generative implementations for predicting design improvements (e.g., optimized dynamic layouts).

Demo:

- Generate UI wireframes based on user requirements and automate layout adjustments using an AI-powered Figma plugin.

Hands-On Practice:

- Participants use Generative AI to create a prototype for a mobile app, including navigation flows, wireframes, and call-to-action placements.
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Module 3: Automating User Research and Persona Creation (3 Hours)

Objective:
Learn how to use Generative AI to automate survey analysis, identify user trends, and generate realistic personas for targeted design.

Topics Covered:

1. Automating insights generation from qualitative user feedback and survey responses with LLM APIs.
2. Summarizing user data into meaningful personas customized to fit specific business goals and design objectives.
3. Leveraging LLM APIs to predict future user behavior based on existing patterns or mock datasets.

Demo:

- Analyze a set of interview transcripts using an LLM to identify behavioral patterns and generate three distinct user personas.

Hands-On Practice:

- Participants upload fictional user survey data and utilize AI outputs to create personas and corresponding design attributes (e.g., goals, pain points).
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Module 4: AI-Powered Usability Testing and Analytics (4 Hours)

Objective:
Use Generative AI tools for advanced usability testing, click tracking, A/B testing optimization, and engagement analysis.

Topics Covered:

1. Leveraging heatmaps and AI-based interaction tracking tools (e.g., Crazy Egg, Hotjar) to identify common user flows and friction points.
2. Generating AI-based usability reports and actionable recommendations based on user engagement data.
3. Experimenting with A/B test content or interface layout suggestions using LLM-driven workflows.

Demo:

- Generate heatmaps and click tracking analysis for a product landing page, then use an AI tool to suggest optimizations for improving user interaction.

Hands-On Practice:

- Run A/B tests on multiple UI designs using AI to analyze engagement metrics and suggest improvements for the tested variants.
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Module 5: Dynamic Interfaces and Intelligent Interactions Using LLM APIs (3 Hours)

Objective:
Learn how to integrate LLM-powered APIs into UI elements for interactive functionality, content generation, and personalized user experiences.

Topics Covered:

1. Embedding dynamic chatbot interactions into products and websites using LLM APIs.
2. Personalizing user-facing content and adapting interfaces based on real-time user queries and preferences (e.g., FAQ generation).
3. Enhancing product interfaces by integrating AI-generated content such as form fillers, autocompletion suggestions, and dynamic FAQs.

Demo:

- Build a chatbot that integrates with an LLM API to generate dynamic, user-friendly responses within a website or app interface.

Hands-On Practice:

- Participants add AI-driven FAQs or dynamic text features to UI elements of a design mockup using live LLM integrations.

Module 6: Ethical Considerations for AI in UI/UX Design (2 Hours)

Objective:
Understand the ethical implications and limitations of integrating Generative AI and LLMs into UI/UX workflows.

Topics Covered:

1. Avoiding bias in AI-generated designs and maintaining inclusivity across all user-facing elements.
2. Privacy and compliance considerations when using AI tools for personalizing user experiences.
3. Responsible prompt engineering for reducing unethical AI outputs in customer-facing applications.

Demo:

- Test an LLM-based content generator for a diverse audience and refine prompts to ensure cultural sensitivity and inclusivity.

Hands-On Practice:

- Participants evaluate pre-generated design templates or content suggestions for bias, language tone, and inclusivity, making adjustments to refine user-focused designs.