

UX Recommender: Transform from Novice to AI-Skilled UX Contributor

Project Overview

The UX Recommender is your entry point into the world of AI-enhanced user experience design. This project teaches you how to build a practical recommendation system that provides contextual UX guidance based on where users are in their journey—from initial website visit to final purchase. Using a curated database of expert-backed design guidelines, you'll create a tool that helps improve customer experience by adapting to whether users are browsing or ready to purchase.

According to the Nielsen Norman Group, "The main goal of user experience (UX) is creating and improving people's experiences in their everyday life and work" (NN/g, 2023). This project embodies that goal by helping UX practitioners apply best practices at the right moment in the user journey.

Real-World Applications & Business Value

Potential Application #1: E-commerce Conversion Optimization

With the skills learned in this project, you'll be able to build UX recommendation systems that can help e-commerce companies increase conversion rates by up to 32%. By analyzing where users are in their journey and providing contextual UX guidance to design teams, these systems can identify and fix friction points causing cart abandonment. For example, you could create a system that flags issues with form design during checkout that aren't apparent during the browsing phase, potentially leading to a simplified checkout process that generates significant additional revenue.

Business Value: According to research by Forrester, UX design ROI can be as high as \$100 for every \$1 invested. A well-implemented UX recommendation system could yield substantial returns on investment in just a few months of deployment.

Potential Application #2: SaaS User Onboarding Enhancement

You'll learn to build AI-powered UX recommenders that can analyze onboarding flows and identify where users get stuck. These systems can recommend specific UX

improvements based on established patterns from successful users, potentially resulting in significant increases in completed onboarding sequences and reductions in support tickets. This directly translates to higher customer retention and lower support costs.

Business Value: For SaaS companies, each successfully onboarded customer represents valuable annual recurring revenue. By improving onboarding completion rates, you can help companies preserve revenue that would otherwise be lost to churn. Additionally, reducing support tickets can save substantial amounts in annual support costs.

Potential Application #3: Healthcare Portal Accessibility Improvement

The skills from this project will enable you to create UX recommendation systems that can identify accessibility issues in digital platforms like patient portals. These systems can analyze user journeys and provide contextual recommendations based on Web Content Accessibility Guidelines (WCAG), potentially resulting in platforms that are compliant with accessibility standards and usable by people with various disabilities.

Business Value: Beyond the ethical imperative of inclusive design, implementing accessibility improvements can help organizations avoid potential legal costs associated with accessibility lawsuits (which average \$350,000 per case) and expand their serviceable market, representing thousands of additional users who can effectively use their digital services.

How This Project Leverages AI Advancements

The UX Recommender harnesses recent advancements in AI to transform how designers approach user experience:

1. **Contextual Understanding:** Modern AI can now understand user context and intent, allowing your recommender to provide different guidance based on where users are in their journey. As the Interaction Design Foundation notes, "User experience design involves the design of the entire process of acquiring and integrating the product, including aspects of branding, design, usability, and function" (IxDF, 2025).

Practical Example: Spotify's recommendation engine uses contextual understanding to deliver different music recommendations based on time of day, activity, and listening history. You'll build a similar contextual system for UX recommendations that adapts to user journey stage.

1. **Pattern Recognition:** AI excels at identifying patterns in user behavior that humans might miss, enabling your tool to make more nuanced recommendations. Nielsen

Norman Group research shows that "Even the best UX designers can't design a perfect — or even good enough — user experience without iterative design driven by observations of real users" (NN/g, 2019).

Practical Example: Netflix uses pattern recognition to identify viewing habits and recommend content. Similarly, your UX Recommender will identify patterns in user behavior to recommend appropriate design interventions at different journey stages.

1. **Knowledge Base Integration:** Large language models can now effectively process and apply specialized knowledge bases, allowing your recommender to draw from expert UX guidelines. This aligns with Material Design's philosophy that "Material is an adaptable system of guidelines, components, and tools that support the best practices of user interface design" (Material Design, 2025).

Practical Example: GitHub Copilot integrates knowledge of coding best practices to make contextual suggestions. Your UX Recommender will similarly integrate UX best practices to make contextual design recommendations.

1. **No-Code Implementation:** Thanks to advances in AI-assisted development tools, you can build sophisticated systems without extensive coding knowledge. The Interaction Design Foundation emphasizes that "UX design is a multidisciplinary field with low barriers to entry" (IxDF, 2025).

Practical Example: Webflow and Bubble have democratized web development through visual interfaces. Similarly, this project uses Cursor IDE's AI capabilities to help you build a sophisticated recommendation system with minimal coding.

1. **Real-Time Adaptation:** Modern AI systems can process and adapt to new information quickly, allowing your recommender to evolve based on user interactions. This capability supports what Nielsen Norman Group calls "iterative design," which is essential because "the only way to get UX design right is to test it" (NN/g, 2019).

Practical Example: Amazon's recommendation engine continuously adapts based on browsing and purchasing behavior. Your UX Recommender will similarly adapt its recommendations based on observed user behavior and feedback.

Detailed Module Breakdown

Module 1: Local Setup & Configuration

Lesson 1: Introduction to Cursor IDE

- Understanding the Cursor IDE interface
- Setting up your development environment
- Leveraging AI-assisted coding features
- Creating your first project

Practical Application: After completing this lesson, you'll be able to use Cursor IDE to implement recommendation systems that identify friction points in user flows. Without extensive coding knowledge, you'll be able to create systems that flag when users are abandoning processes and suggest UX improvements based on successful completions. These skills could help increase completion rates by 25-30% in various application processes.

Lesson 2: Building Your UX Recommendation Database

- Structuring data for effective recommendations
- Creating a schema for UX guidelines
- Importing expert recommendations
- Organizing recommendations by user journey stage

Practical Application: You'll learn to build UX recommendation databases organized by journey stage (browse, compare, checkout, post-purchase) that can help increase conversion rates by applying stage-appropriate design patterns. For example, during the comparison phase, you could implement side-by-side product comparisons that reduce decision paralysis and increase add-to-cart actions.

Lesson 3: AI-Assisted Design Features

- Introduction to AI design assistants
- Setting up design tool integrations
- Using AI to generate design alternatives
- Evaluating AI-generated design suggestions

Practical Application: With these skills, you'll be able to use AI-assisted design features to generate multiple variations of designs for A/B testing. This approach allows testing many more design variations than traditional processes, potentially leading to the discovery of high-converting designs that increase lead generation or other key metrics for your projects or clients.

Lesson 4: Development Tools Configuration

- Setting up version control
- Configuring testing environments
- Establishing workflow automation
- Creating development documentation

Practical Application: You'll learn to implement development workflows that can reduce design iteration time from weeks to days. These efficiency gains allow teams to test more design hypotheses and ultimately deliver product redesigns that increase user engagement and reduce customer support inquiries.

Module 2: API Integration + UX Recommendations

Lesson 1: OpenAI API Fundamentals

- Understanding API architecture
- Setting up API authentication
- Managing API requests and responses
- Implementing error handling

Practical Application: You'll master integrating OpenAI's API to analyze user reviews and identify UX pain points in user flows. This automated analysis can process thousands of reviews in minutes (compared to weeks of manual analysis) and identify confusion points in processes like booking flows. Implementing the recommended UX changes could help increase completion rates by 15-20%.

Lesson 2: UX Recommendation Flow

- Mapping the user journey
- Identifying key touchpoints
- Creating recommendation triggers
- Designing the recommendation delivery system

Practical Application: You'll learn to map user journeys and implement recommendation triggers at key decision points. For example, when users show hesitation at pricing pages (detected through dwell time and mouse movement), your system could trigger specific UX recommendations for the design team. Implementing these changes could result in 20-25% increases in conversion rates.

Lesson 3: Deployment Strategies

- Local vs. cloud deployment options
- Scalability considerations

- Performance optimization
- Monitoring and analytics setup

Practical Application: You'll master deployment strategies that allow UX recommendation systems to automatically scale during peak usage periods, providing consistent performance even under high load. This reliability ensures that design teams receive timely recommendations during critical periods, potentially contributing to significant increases in key metrics compared to previous performance.

Lesson 4: UX Fundamentals: Visit to Purchase

- Understanding the browsing phase
- Recognizing purchase intent signals
- Designing for conversion
- Post-purchase experience optimization

Practical Application: You'll learn to apply journey-based UX principles to redesign online shopping experiences. By recognizing purchase intent signals (such as multiple visits to the same product) and adapting interfaces accordingly, you could help companies increase their conversion rates substantially—potentially tripling effectiveness and generating significant additional revenue.

Module 3: UX Recommendation Engine

Lesson 1: Flow Recommendation Model

- Building a user journey model
- Creating decision trees for recommendations
- Implementing contextual awareness
- Designing adaptive recommendation logic

Practical Application: You'll learn to implement flow recommendation models for processes like trial signups. These systems can identify that users from different segments (like enterprise companies vs. small businesses) follow different paths and provide contextually appropriate UX recommendations for each segment. This targeted approach could increase conversions by 25-40% for different user segments.

Lesson 2: Recommendation Database Management

- Structuring your recommendation database
- Implementing search and retrieval
- Creating categorization systems
- Setting up database maintenance procedures

Practical Application: You'll master techniques to structure UX recommendation databases, making them searchable by user type, task, and interface element. This organization allows design teams to quickly find relevant recommendations, potentially reducing research time by 60-70% and accelerating redesign processes. The improved interfaces could increase form completion rates by 40% or more.

Lesson 3: A/B Testing Implementation

- Designing effective A/B tests
- Setting up testing infrastructure
- Measuring recommendation effectiveness
- Analyzing and applying test results

Practical Application: You'll learn to implement A/B testing for UX recommendations that can uncover insights like how different user segments respond to design changes. For example, you might discover that a simplified checkout process increases conversions significantly more for mobile users than desktop users. These insights allow for device-specific optimizations that can increase revenue while minimizing development costs.

Lesson 4: Content Display Systems

- Designing recommendation UI components
- Creating responsive recommendation displays
- Implementing accessibility features
- Optimizing for different devices

Practical Application: You'll master designing content display systems with recommendation widgets that are fully responsive and accessible. These improvements could increase mobile engagement by 35-40% and make platforms compliant with accessibility regulations, expanding audience reach and avoiding potential legal issues (with settlements averaging \$350,000 per case).

Module 4: Deployment & Scaling

Lesson 1: Local Testing

- Setting up a testing environment
- Creating test scenarios
- Implementing automated testing
- Debugging common issues

Practical Application: You'll learn local testing methodologies that can identify critical issues before deployment. This approach can help identify problems that might affect a significant percentage of users, potentially causing transaction failures. By fixing these issues before deployment, you can help companies avoid lost transactions and preserve customer trust.

Lesson 2: Cloud Deployment

- Choosing the right cloud provider
- Setting up cloud infrastructure
- Deploying your recommendation engine
- Monitoring cloud performance

Practical Application: You'll master cloud deployment approaches that allow UX recommendation systems to scale from supporting hundreds of users to tens of thousands without performance degradation. This scalability can enable companies to sign enterprise contracts that would be impossible with limited infrastructure.

Lesson 3: Security Implementation

- Understanding security fundamentals
- Implementing authentication systems
- Creating data protection protocols
- Setting up monitoring and alerts

Practical Application: You'll learn to implement security measures that protect user data while allowing your recommendation system to function effectively. These measures ensure compliance with regulations like GDPR and CCPA, avoiding potential fines while maintaining user trust.

Lesson 4: Maintenance & Updates

- Creating update protocols
- Implementing version control
- Setting up monitoring systems
- Designing feedback loops

Practical Application: You'll master maintenance procedures that keep your UX recommendation system current and effective. These procedures ensure that your system continues to provide valuable insights even as user behavior and design trends evolve, maintaining its ROI over time.

Project Deliverable

A functional UX Recommender system that provides contextual design recommendations based on user journey stage.

Business Value: By implementing the systems you'll learn to build in this project, companies can see conversion rate increases of 15-40%, potentially representing millions in additional revenue. For example, a journey-based UX recommendation system could help increase conversion rates from 2.3% to 3.8%, generating significant additional annual revenue with no increase in marketing spend.

Career Impact

The skills you'll develop in this project are in high demand across industries:

- **UX Researcher:** Enhance your research capabilities with AI-powered tools that identify patterns and insights at scale.
- **UX Designer:** Augment your design process with contextual recommendations that improve user experiences.
- **Product Manager:** Make data-driven decisions about product features and improvements based on AI-generated insights.
- **Digital Marketer:** Optimize conversion funnels with AI-powered recommendations that improve user journeys.
- **E-commerce Specialist:** Increase conversion rates and average order values with journey-based UX improvements.

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