Modeling

Contents

Introduction

As an entrepreneur starting your project, you can use modeling applications to create a quick and affordable initial plan for your product. This guide will show you how to use modeling effectively to develop your product, enhance user experience, and understand how it works.

What is Modeling?

When considering product design and user experience, modeling is the initial step you can take. It helps you validate your ideas and hypotheses by shifting from abstract thinking to practical application.

Why is it Important?

01 It saves time and money by following a reliable process.

02 It encourages brainstorming and boosts creativity in product design.

03 It effectively communicates the idea to investors, partners, or potential users.

04 It tests and validates the idea to ensure its effectiveness.

05 It prioritizes the user and their experience.

When Do You Need it?

01 When developing a website or mobile app.

02 When avoiding costly mistakes and losses.

03 When effectively conveying your idea to investors or users.

Modeling Types

Sketching

Ideas are visually represented and often recorded for personal use.

High-Fidelity Models:

Emphasizing the product's effectiveness for users, these models are utilized to describe the product to partners and investors.

Low-Fidelity Models:

With a focus on product design, these models are used to describe the product to designers.

Prototyping Tools

Adobe XD

Suitable for creating high-resolution models, especially if you have prior experience with Adobe design tools.

Balsamiq

Ideal for generating low-resolution models due to its user-friendly interface and quick design capabilities.

Paper and pen

If your product modeling is straightforward and practical, using traditional pen and paper works just fine.

Figma

A versatile tool for high-fidelity modeling, known for its user-friendly interface and collaboration features for team projects.

InVision Studio

A tool that combines high-resolution modeling, ease of use, team collaboration features, and animation capabilities.

Axure

An advanced modeling tool for precise models and various interactions, including mathematical calculations, conditions, and logic.

Product usability

Here are some ways to assess the usability of your product:

- Align the model with Jakob Nielsen's 10 Essentials and thoroughly evaluate its performance across all the specified criteria.

01 System status visibility
02 Real-world compatibility
03 User control and freedom
04 Consistency and adherence to standards
05 Error prevention

06 Recognition over recall
07 Flexibility and efficiency in use
08 Aesthetic design and simplicity
09 Assistance in error identification, diagnosis, and recovery
10 Documentation and support

- Assess usability through testing the products with potential users and gather their opinions using interviews or user testing tools.

User Testing

AI Product Design

Modeling AI products requires more time and effort compared to digital products. Before starting, it's important to understand why AI is needed to solve the problem. Ask yourself the following questions to gain clarity:

| ? | Has this problem been previously solved, and can existing solutions be utilized? | > | If there are prior solutions available, you can leverage them as a starting point to address the problem. |

| ? | What kind of data is required to solve the problem? | > | This can include images, qualitative and quantitative data, or natural language processing. |

| ? | Do you have your own data? Is it complete or in need of refinement? Does it require labeling or annotation? | > | If you don't have the necessary data, you can plan to legally collect it. |

| ? | How will the AI model tackle the problem? | > | By classification, prediction, and process automation. |

Product usability

What approach will be taken for the model training process?

Through supervised learning, unsupervised learning, reinforcement learning, and deep learning.

How does the model function?

What inputs will users provide, and how will the system process them, either in batches or individually upon request? What are the expected outputs?

Deep Learning Tools

There are two types of tools that require programming skills and basic knowledge of data science and machine learning:

01 Open-source libraries: These tools are flexible but require programming and data science expertise. Some of them come with pre-trained models.

Keras   PyTorch   TensorFlow

OpenCV   learn

02 AI service tools/APIs: These tools offer artificial intelligence capabilities as a service and are designed to solve specific problems.

Hugging face   AWS services   Google Cloud Platform

IBM Watson   Azure

Some AI service tools are designed for users without programming or data science knowledge. These tools are tailored to solve specific problems and don't require extensive technical expertise.

IBM Watson   aws AWS services   Google Cloud Platform   Azure