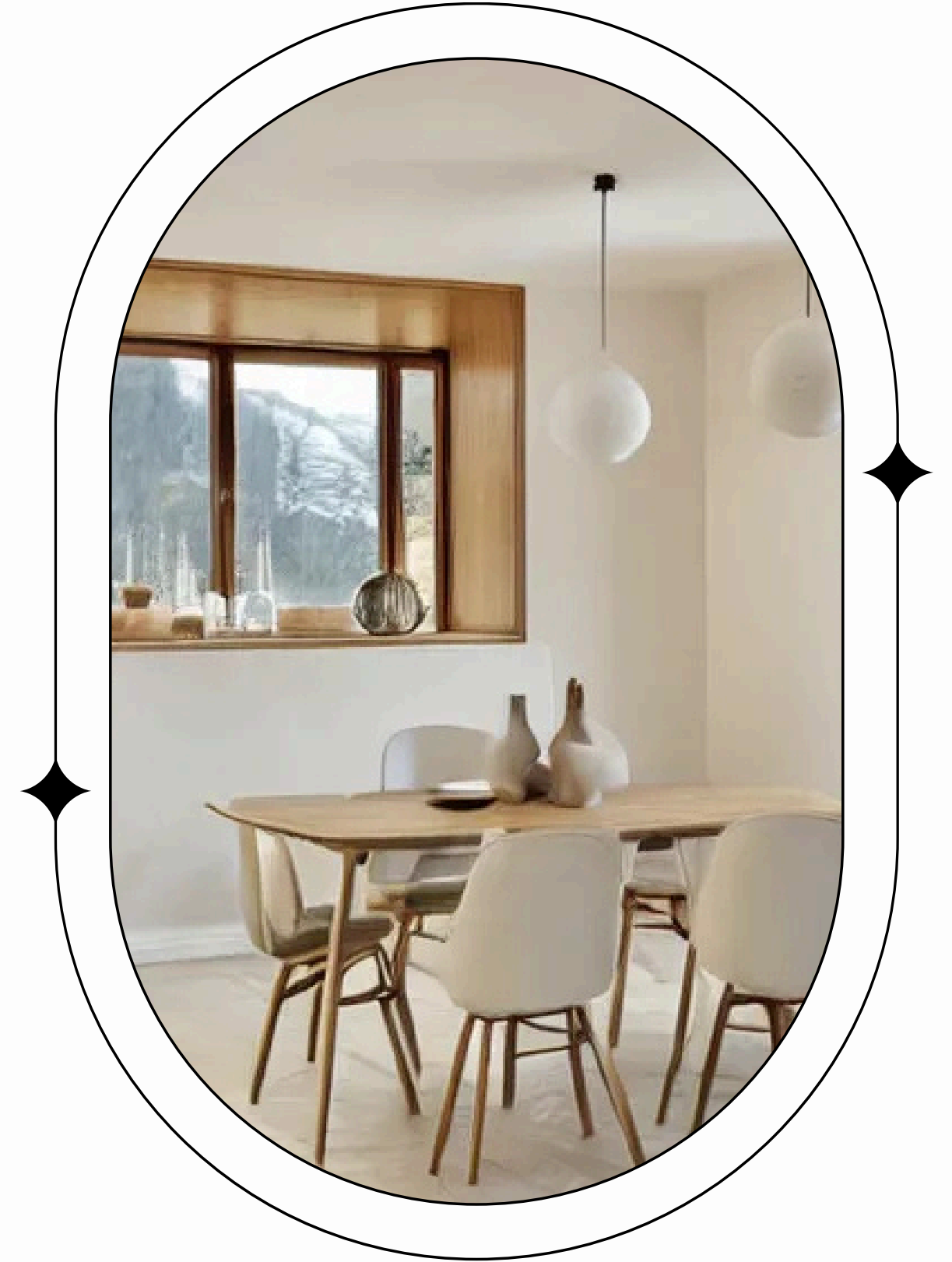# ROOM TRANSFORMATION STUDIO

INDIVIDUAL PROJECT

AI

My project uses a pre-trained Stable diffusion model (an AI image generator) from Hugging Face.
I adapted it to my needs by changing most of the instructions transmitted to the neural network. Also, I had to change the fact that the AI model only worked with prompts and I wanted it to build the room on top of an existing image.

How it works:
- the user adds a picture (either from the memory of the device or the user can take a picture directly from the app)
- the user chooses the style, preferred colors, wood and the room type
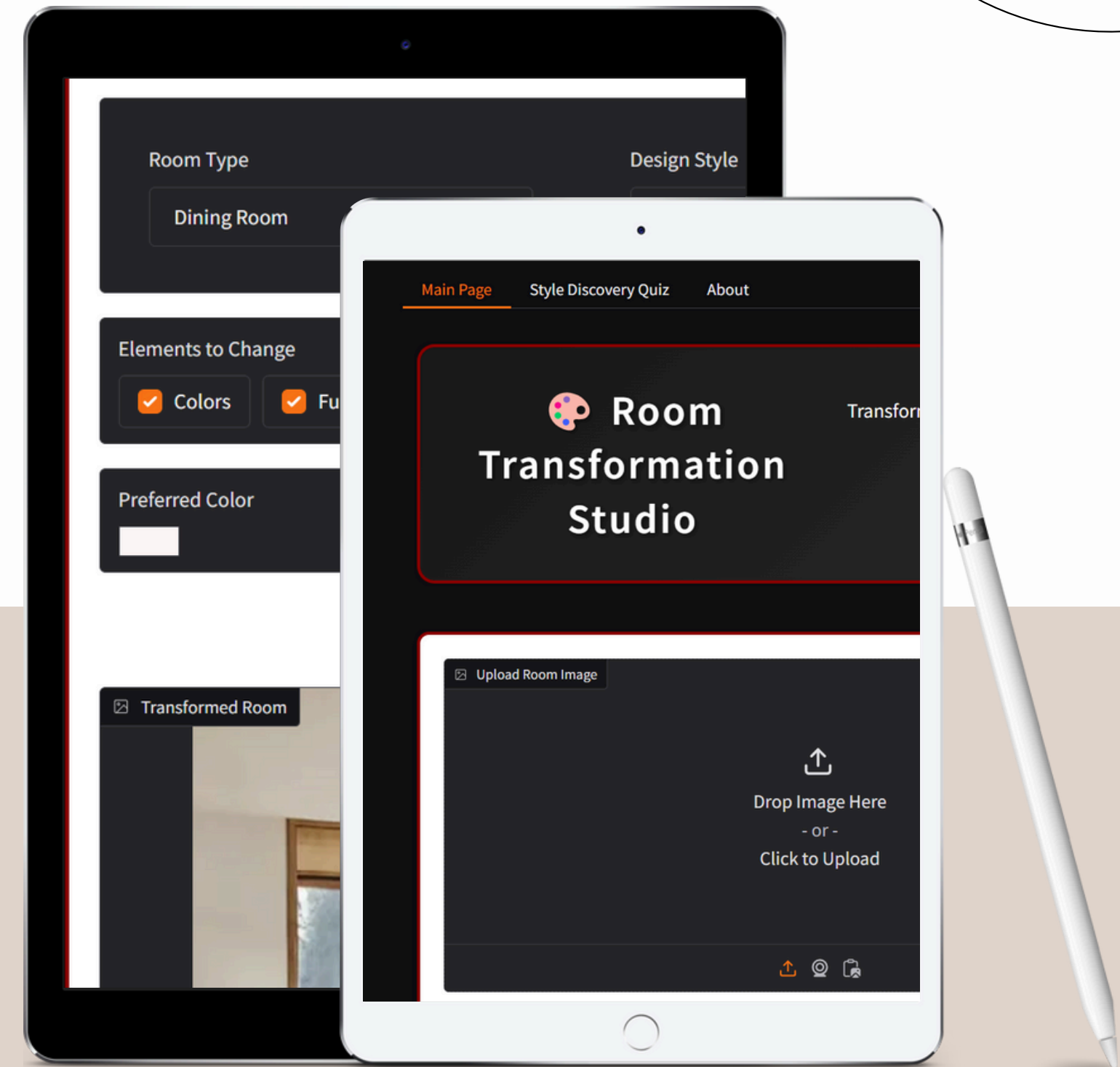- the AI generates a new image with the furniture and decor

API USAGE

Stable Diffusion Model

- Used via an API from Hugging Face
- Adapted to the needs of our platform

Graphical User Interface

- Using Gradio (a predefined library that works like an API)
- Has a predefined design that I modified to suit my needs using CSS
- Allowed me to have more interactive buttons and functionalities

Initial ideea

Requirements

- To be easy to access
- To help the user build a dream home
- To provide inspiration
- To inform the user about style choices
- To implement AI in room design
- To train the AI model on a large database
- To have a simple and modern design
- To fulfill a customer's need
- To have a test to help us find our preferred style

Procedure

Programm Language: Python
AI model used: Stable Diffusion

Functionalities

Function to upload a picture, AI image generation, Interactive Stile quiz

EXAMPLES OF GENERATED IMAGES

The AI model was feed with the same image everytime, but the style choices were different

THANK YOU FOR YOUR TIME!