CANVA8

Leverages AI-powered computer vision and language models to convert images into HTML and CSS automatically. It ensures accurate UI element recognition, semantic understanding, and efficient code generation.

CANVA8: Automating Image-to-Code Conversion with AI

Background

Web development often requires converting design mockups into HTML and CSS, a time-consuming and error-prone process. CANVA8 automates this workflow using computer vision and language understanding, enabling accurate UI element recognition and seamless code generation.

Key Challenges

The platform needs to correctly identify images across various design styles. If recognition fails, the generated code will be incorrect, leading to a poor user experience. Designs often have multiple layers and nested sections, and need to adjust for different screen sizes. The challenge is ensuring CANVA8 correctly understands these structures so the final output looks and functions as intended. Businesses need code that is easy to edit, efficient, and compatible with different platforms. If the generated code is messy or bloated, developers will spend extra time fixing it, reducing productivity. Large images and complex designs must be processed quickly

without slowing down the system. If CANVA8 takes too long, it won't be practical for real-world business use.

Our Solution

We have used advanced AI to recognize images, ensuring that every design element is accurately identified and placed. The platform intelligently translates designs into clean, structured code, reducing manual work and making it easy for developers to use and modify. The generated code is streamlined for faster performance, ensuring websites and applications load quickly and function smoothly. The solution learns from real designs over time, constantly improving its accuracy and adaptability to handle new styles and layouts effortlessly.

Tech Stack

Deep Learning Frameworks: PyTorch

LLMs for Code Generation: GPT-2, BART, BART50, LLaMA

Front-End Technologies: HTML, CSS

Infrastructure: AWS Cloud-based deployment for scalability

Value Delivered

100% Reduction in Manual Coding Effort and Elimination of Repetitive Coding Tasks.

Faster Web Development Cycles by Automated UI-to-code conversion, saving hours per project.

Consistency & Accuracy with Standardized code generation across different designs.

Seamless Designer-Developer Workflow by Bridging the gap between design tools and coding environments.