iauro

Shapeshifting

UI DESIGNS

in Real Time

Feasible or Impossible?

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Generative AI (GenAI) continues to disrupt the way businesses are done. Processes are being challenged and optimized. Changes in the nature of work, required skill sets are causing major shifts in the job market. In a scenario such as this one, the realm of User Interface Design might be gearing up for yet another wave of AI takeover.

The scope of GenAI assistance in UI Design may well go beyond creating design prototypes and speeding up the iterative process of designing. Can different Users experience distinct UI Designs in real time? Are multiple User Experiences for the same service possible? Will the way customers consume digital solutions change?

Generative UI – Innovation with a new promise

Generative UI (GenUI) innovations promise to give highly personalized experiences that evolve in real-time based on user behaviour and goals. The Neilson Norman Group's research shows a shift from Interface-Oriented Design to Outcome-Oriented Design. This translates to using GenAI and Machine Learning to process data on user goals, past preferences, environment and provide distinct UI designs in real time. This could be a game-changing technology that can give businesses a competitive edge.

Redefining Digital Interactions: iauro's Take on GenUI

Key components

It all starts with understanding User Goals. Key components include Dynamic UI elements like user's persona, device, and environmental constraints and more complex Adaptive UI elements like learned behaviour patterns and context. Using GenAI to collect intuitive insights in real time will help create personalized User Experiences for users.

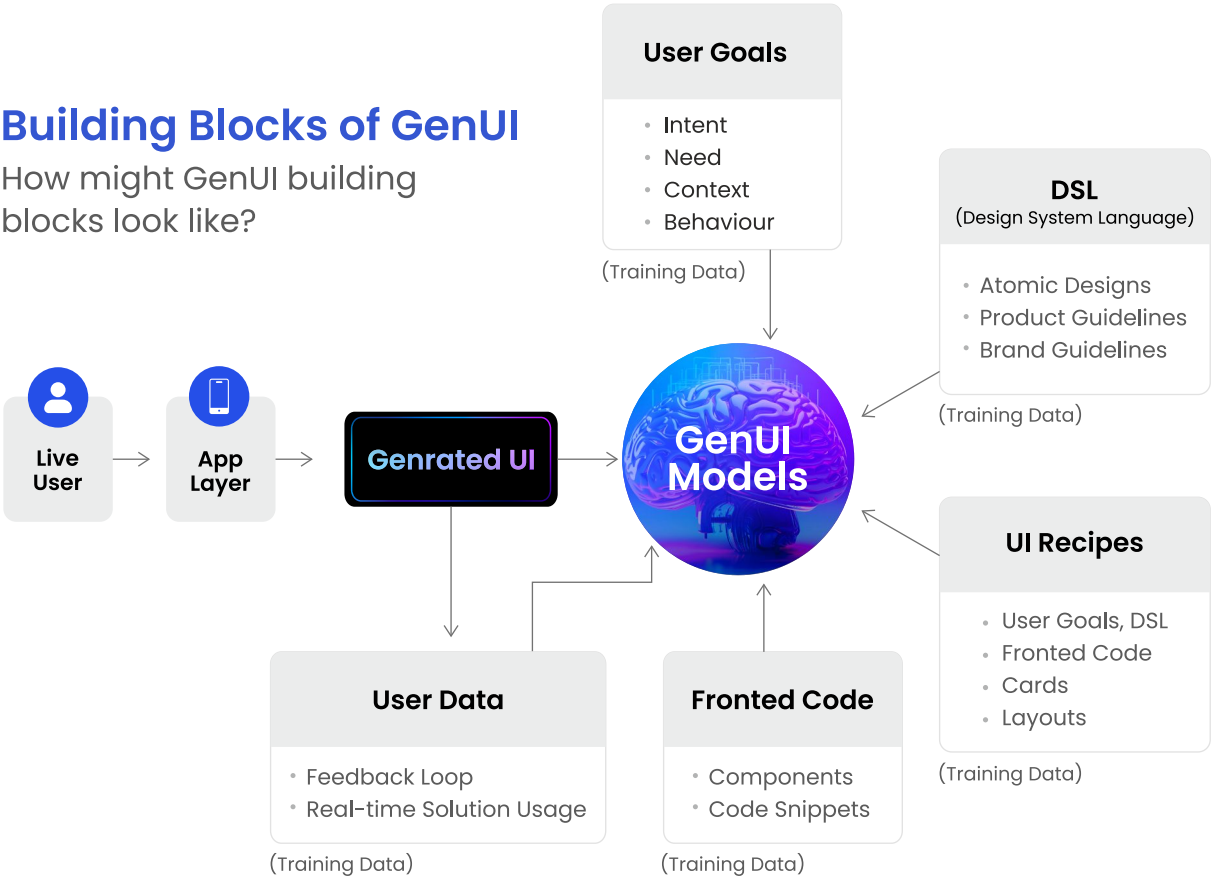
Is the implementation of such a solution feasible?

The building blocks for delivering GenUI solutions must include:

Data on User Goals, GenUI Models to process the data, Design System Language, UI recipes– templates and layouts, Frontend code, Generated UI– the output & a Feedback Loop.

Building Blocks of GenUI

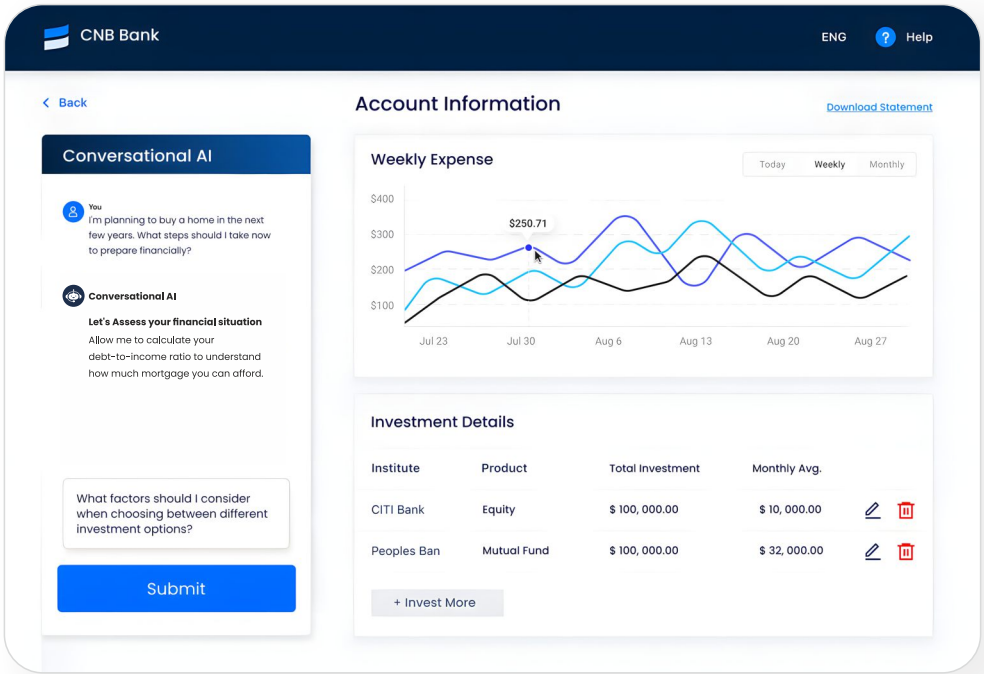
How might GenUI building blocks look like?



Applications of Generative UI

Scenario 1

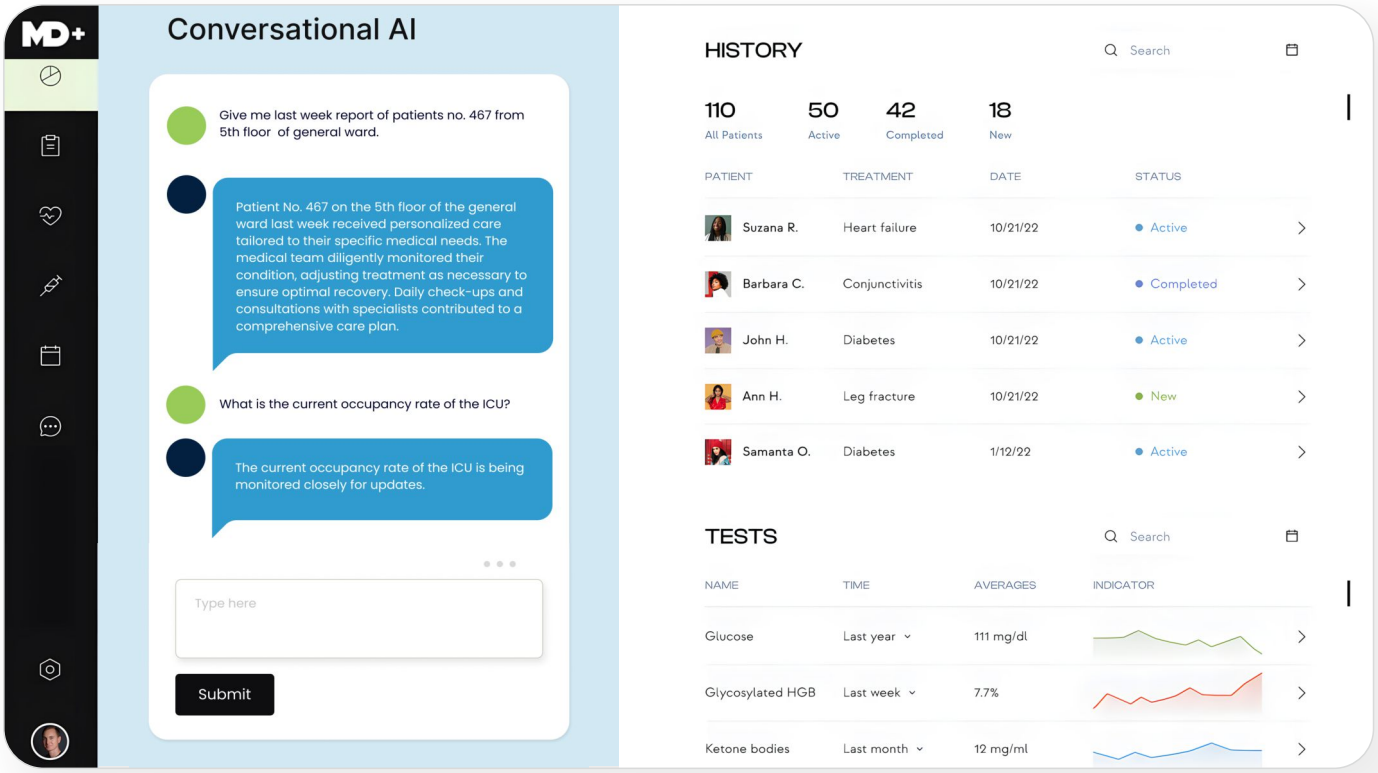
Redesigning Internet Banking with Conversational Inputs, Mixed Outputs, and Automated Actions



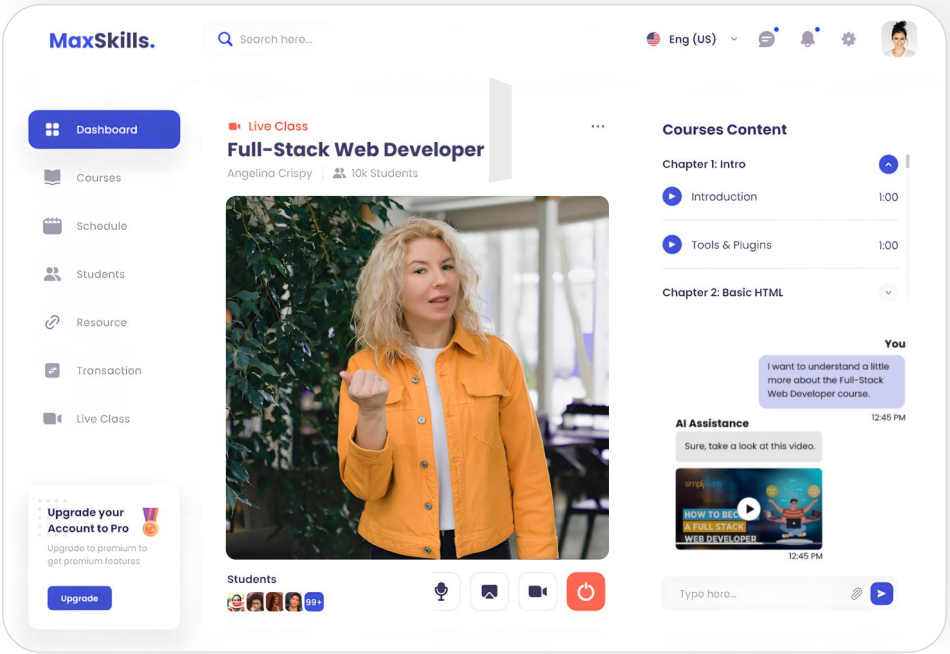
A user can provide conversational inputs to the UI, ask for personalized financial advice, spending patterns & get intuitive responses using a mix of text and visual elements. The new-age UI designs can work as AI Finance Agents presenting relevant information to the customer in real time.

Scenario 2 GenUI driven Power BI Dashboards in Healthcare

Manual data interpretation, static data views, multiple clicks and filters to compile relevant information might soon become a thing of the past. GenUI powered BI Dashboards will help healthcare professionals process conversational commands, analyse patient data, bring forth relevant information and present it using interactive visualizations like dynamic charts and graphs, all in real time and using a single command. Real-time alerts on inventory and automated reporting are potential applications too.



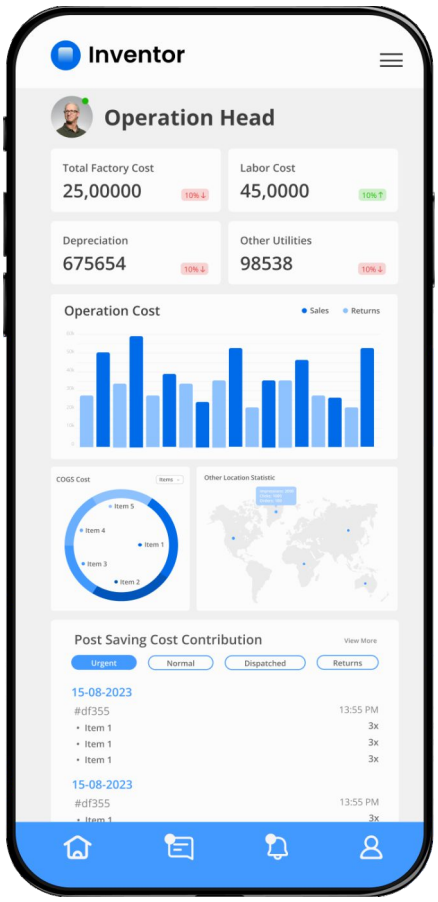
Scenario 3 Interactive Learning Solutions using Universal Applications for EdTech

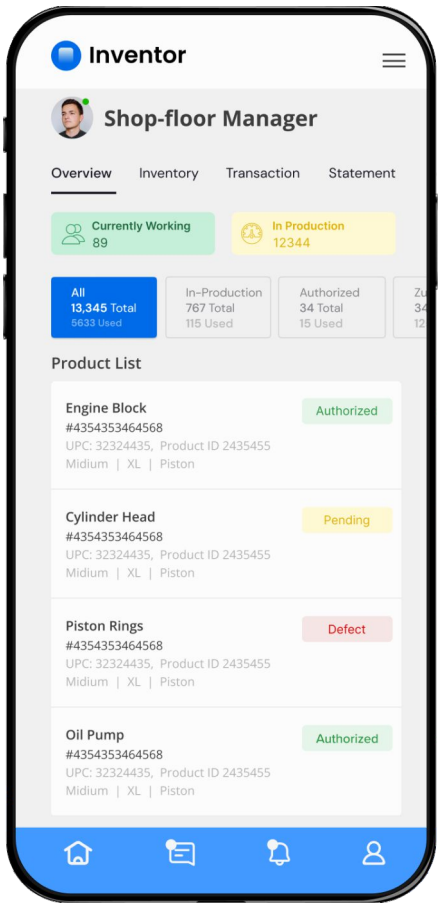


Students and teachers can use GenUI-powered Learning Solutions that allow for seamless interactive engagement. Multi-source inputs will be processed through layers such as UI Generation Orchestrator, GenUI, AI agents, backend systems, APIs, and data knowledge bases. An Output layer will be generated on the fly to provide real-time responses that are a combination of multiple types like text, images, audios, and videos.

Scenario 4

Distributed GenUI to boost operations

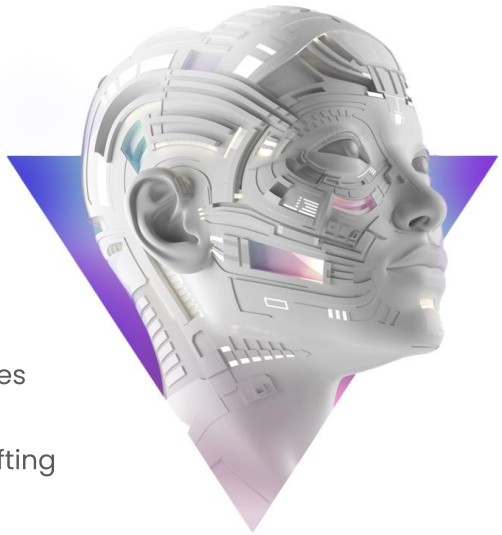


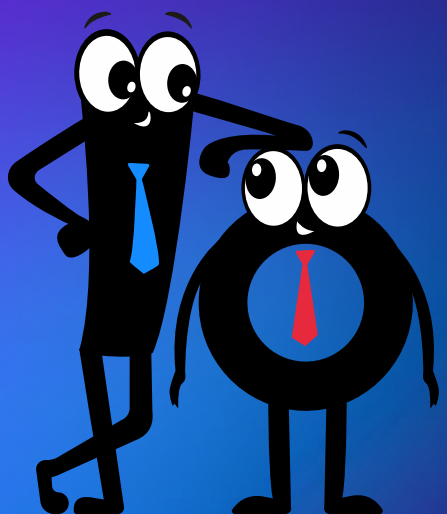


Operational queries range from a shop floor manager checking the inventory of materials to an operations head optimizing budgets. Distributed GenUI addresses this requirement. An innovative strategy, it involves creating interfaces that are not static or pre-defined, but dynamically generated & seamlessly distributed across various platforms and devices. To implement this successfully, experts must rethink & restructure digital architectures for more adaptive, responsive, & user-centric experiences.

Will real-time, personalized GenUI designs become a reality soon?

We certainly think so. GenUI and GenAI are opening up endless possibilities with dynamic, adaptive, & personalized User Interface Designs. By understanding user goals, leveraging advanced AI models, and integrating a robust feedback loop, these technologies promise to deliver seamless and efficient solutions across various applications. As we move towards this future, the potential for crafting intuitive and responsive digital experiences is limitless.





Let's explore how these advancements can transform your digital strategies.

Reach out to join the conversation.

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