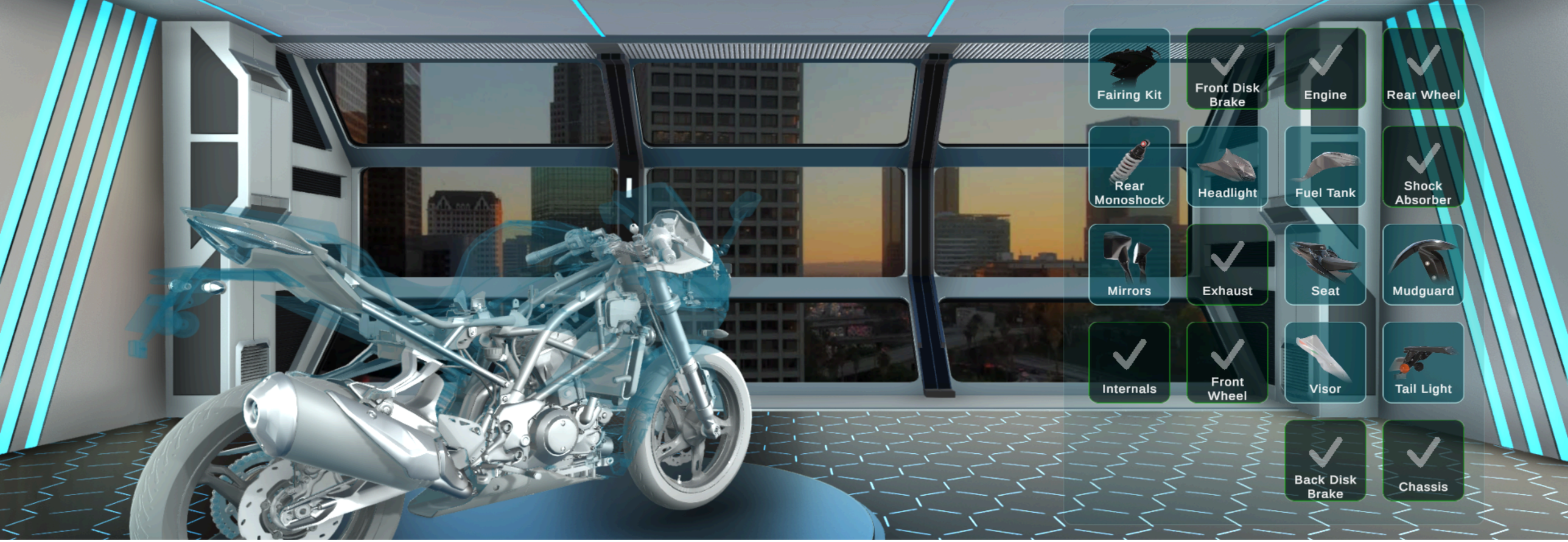
case study

Kidzania- Bike design Studio
Interactive 3D Simulation TVS

TILTLABS



executive summary

Kidzania sought to create an engaging, educational 3D bike design experience for children using a touch-enabled kiosk. Kids can model a customizable TVS Apache RR310 motorbike through prebuilt part assemblies and decorate it with colors, text, and accessories. An augmented reality feature captures the child's photo alongside their bike design to share via email or social media.

project challenges

Age-Appropriate 3D Modeling

Designing age-appropriate 3D modeling complexity for two distinct age groups (4-6 years and 6+ years) posed a significant challenge. We needed to balance simplicity and engagement to ensure that children of all ages could participate and enjoy the experience.

Seamless Integration of 3D Graphics and AR

Seamlessly blending 3D graphics with an augmented reality camera feed presented a technical challenge. We needed to ensure that virtual bike designs appeared lifelike and integrated seamlessly with the physical environment captured by the AR camera, enhancing the overall immersive experience.

Real-Time Performance Optimization

Ensuring real-time performance for interactivity on target hardware was crucial. We faced the challenge of optimizing the application to run smoothly on the touch-enabled kiosks while maintaining high levels of interactivity and responsiveness, even during peak usage times.

Creating Shareable Media and Prints

Developing a system for creating shareable media and prints to extend the experience's reach posed a logistical challenge. We had to implement a solution that allowed children to easily share their customized bike designs with friends and family, both digitally and in print format while maintaining the integrity of the design.

goals & objectives

Entertain and Educate Children

The project's primary goal was to entertain and educate children about engineering principles in a fun and interactive manner. By allowing children to design and customize their bikes, we aimed to foster creativity and curiosity while imparting basic design and engineering concepts.

Provide Personalized Memorialization

An important objective was to provide personalized memorialization of the experience, promoting sharing and extending the reach of the Kidzania brand. By enabling children to capture photos alongside their bike designs and share them via email or social media, we aimed to create lasting memories and encourage engagement beyond the physical kiosk.

Showcase Innovation Leadership

The project also aimed to showcase Kidzania's innovation leadership in the realm of interactive technology exhibitions. By leveraging cutting-edge technology such as augmented reality and dynamic media generation, we aimed to create a standout experience that would reinforce Kidzania's position as a leader in providing immersive and impactful experiences for children.

solutions & methodology

Intuitive Interface Design

Designing an intuitive user interface with drag-and-drop functionality for assembling 3D bike parts, allowing children to easily customize their designs.

Unity 3D and Vuforia AR Integration

Leveraging Unity 3D engine for robust cross-platform compatibility, combined with Vuforia AR functionality to enable augmented reality features.

Real-time Performance Optimization

Optimizing the application for real-time performance on target hardware, ensuring smooth interactivity and responsiveness during the design process.

Customization Features

Implementing customizable options such as colors, textures, and lighting to empower children to personalize their bike designs according to their preferences.

Dynamic Media Generation

Developing a dynamic media generation system to create shareable images and prints of the children's bike designs, extending the experience beyond the kiosk.

Augmented Reality Integration

Seamlessly integrating augmented reality features to overlay virtual bike designs onto the physical environment, enhancing the immersive experience.

project execution

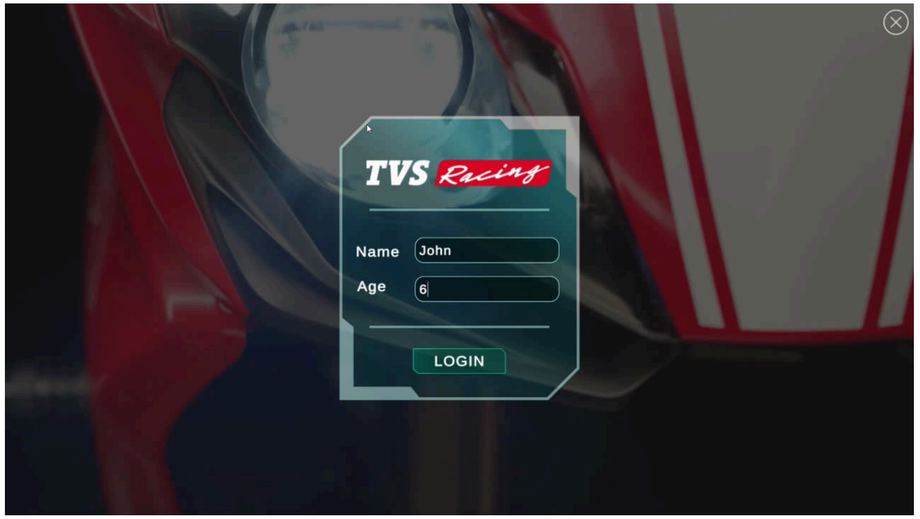
3D Model Creation
Over a span of 6 weeks, our team meticulously designed and modeled the TVS Apache RR310 motorbike and its various customizable parts.

Interactivity Implementation
We focused on user experience and spent 5 weeks implementing intuitive interactivity features, including drag-and-drop functionality and customization options.

AR Module Integration
Over a period of 3 weeks, we integrated augmented reality functionality, allowing virtual bike designs to interact seamlessly with the physical environment.

Infrastructure and Kiosk Setup
To ensure seamless deployment, we dedicated 2 weeks to setting up the necessary infrastructure and configuring touch-enabled kiosks.

Testing and Refinement
Throughout the 4-week testing phase, we conducted rigorous testing to identify and address any issues, ensuring a flawless user experience.



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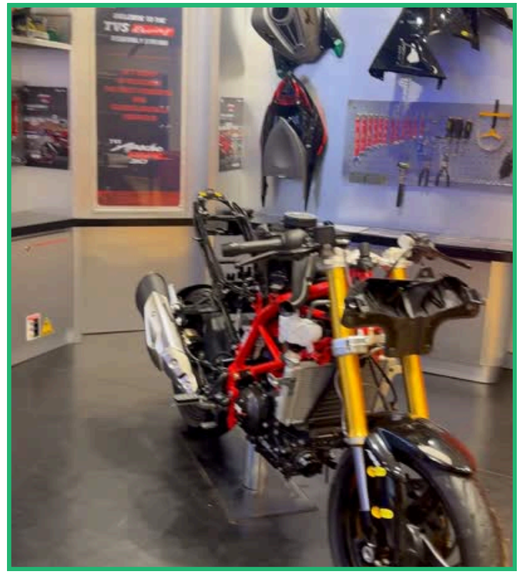
outcomes & results

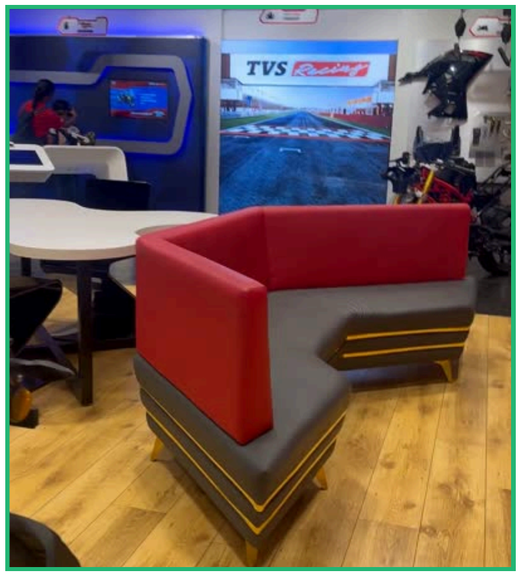
High Engagement Levels:
The immersive and interactive nature of the experience led to extended session durations, indicating high levels of engagement among children.

Social Shares and Exposure:
The project generated hundreds of positive social shares, amplifying brand exposure and increasing awareness of Kidzania's innovative offerings.

Strong Demand:
The popularity of the Bike Design Studio was evident from consistently full kiosks and enthusiastic participation from children.

Increased Brand Affinity:
Both parents and children expressed increased brand affinity, solidifying Kidzania's reputation as a leader in providing immersive and impactful experiences for children.





conclusion

The Kidzania Bike Design Studio has proven to be a resounding success, blending education and entertainment in a seamless interactive experience. By nurturing creativity and sparking curiosity, this innovative initiative has left a lasting impression on young minds, reinforcing Kidzania's commitment to providing immersive and impactful experiences for children worldwide.

Thank You

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