3D COMMERCE

2D-Product-Configurator

Client: Bugbite Studio

Project Date: 2024

Description:

The 2D Product Configurator is a web-based solution designed to visualize product variations. This innovative tool uses rendered high-quality product images, which are swapped out based on user interface choices made by customers. As users select different options, the product price is updated in real-time, and the total cost of the product is calculated accordingly.

By allowing customers to see the product with their selected customizations, the 2D Product Configurator enhances the shopping experience, making it more interactive and personalized. This tool not only helps customers to better understand the product and its variations but also provides immediate feedback on the cost implications of their choices. The dynamic price updating feature ensures transparency and helps in building trust with the customers. Overall, the 2D Product Configurator streamlines the decision-making process, leading to increased customer satisfaction and potentially higher sales conversions

3D-Commerce-AR

Client: Navana Furniture

Project Date: 2023

Description:

This solution is a web-based 3D model and Augmented Reality (AR) viewer. The concept is to display 3D products instead of just a product image on an e-commerce single product page. The product's 3D model is converted and optimized for the web, allowing it to be viewed from any angle through touch or mouse interaction. The 3D model can also be viewed in AR from the 3D viewer by pressing "View in AR," which helps customers see the product before making a purchase decision. Additionally, it is integrated with a product variation menu, allowing users to change the texture and color of the product.

3D-Commerce-Product-Viewer

Client: Bugbite Studio

Project Date: 2024

Description:

A WebGL-based 3D product viewer, it helps e-commerce customers view life-sized products effectively instead of just seeing product images and videos. The concept is to display the product in a 3D setup and environment with high-quality real-time rendering, so users get an accurate idea of the product's highest quality. The product's 3D model is converted and optimized for the web, allowing it to be viewed from any angle through touch or mouse interaction. Users can also switch between interior and studio setups to view the product's presentation quality. As an e-commerce-based solution, the product batch process is integrated by default. For multiple products, by passing the product SKU in the API parameter, the solution will dynamically display the specific product from the asset server without third-party intervention

Real-Time-3D-Configurator

Client: Bugbite Studio

Project Date: 2024

Description:

A WebGL-based 3D product configurator, it enables e-commerce customers to view life-sized products effectively, beyond just images and videos. The concept is to present the product in a 3D setup and environment with high-quality real-time rendering, allowing users to appreciate the product's highest quality. The 3D model is converted and optimized for the web, enabling it to be viewed from any angle via touch or mouse interaction. Users can also switch between multiple interior setups to assess the product's presentation quality.

Given that this is a Real-time solution, 3D models are loaded at runtime via API, allowing for the addition of unlimited models to the app library through the backend. In addition to changing products, users can modify the look and feel of the interior to view the product in various setups.

Sanitaryware-3D-Configurator

Client: RAK Ceramics

Project Date: 2025

Description:

A WebGL-based 3D product configurator, it allows e-commerce customers to view life-sized products more effectively than traditional images and videos. The solution presents the product in a 3D setup and environment with high-quality real-time rendering, providing users with a clear idea of the product's quality. The 3D model is converted and optimized for the web, enabling users to view it from any angle using touch or mouse interactions. Additionally, users can switch between multiple interior setups to assess the product's presentation quality.

Studio3D-Configurator

Client: HATIL

Project Date: 2025

Description:

A WebGL-based 3D product configurator, it enables e-commerce customers to view life-sized products more effectively than with just images or videos. This tool allows users to see the product in a 3D setup and environment with high-quality real-time rendering, providing a clear understanding of the product's top quality. The 3D model is converted and optimized for the web, allowing users to view it from any angle through touch or mouse interaction. Additionally, users can switch between studio and 360-degree interior setups to assess the product's presentation quality. Optimized specifically for the web, the solution loads within a few seconds. Besides changing products, users can also alter product variations and access detailed product information.

3D Visualization

Belgravia-Visualization

Client: Navana Real-Estate

Project Date: 2022

Description:

Belgravia is a luxurious architecture project by Navana Real Estate. The software solution involves developing an augmented reality (AR) app to visualize a photorealistic 3D model of Belgravia using a brochure marker. The AR app features several unique elements, including a dynamic environment with crowd and vehicle simulation, vegetation, a dynamic day and night cycle, a water system that adapts to lighting conditions, and clouds that change over time.

From an optimization perspective, the infrastructure employs optimized models and an interior depth shader for building windows, creating a parallax view from outside without using additional 3D models. The app also includes a mode for walkthroughs from a first-person perspective and a 3D model view of the entire building.

Brentwood-Visualization

Client: Navana Real-Estate

Project Date: 2023

Description:

Brentwood is a luxurious architecture project by Navana Real Estate. The software solution involves developing an augmented reality (AR) app to visualize a photorealistic 3D model of Brentwood using a brochure marker. The AR app features several unique elements, including a dynamic environment with crowd and vehicle simulations, vegetation, a dynamic day and night cycle, a water system that adapts to lighting conditions, and clouds that change over time. To optimize performance, the app utilizes refined models and an interior depth shader for building windows, achieving a parallax effect from the outside without additional 3D models. Additionally, the app provides a first-person walkthrough mode and a comprehensive 3D model view of the entire building.

Virtual-Trade-Fair

Client: HATIL

Project Date: 2021

Description:

Virtual Fair is an effective solution for organizers to host fairs virtually, allowing visitors to join remotely. This WebGL-based platform provides all the features of a physical fair. Users can register for the event and join at the scheduled time. They will navigate the virtual fair from a first-person perspective, visiting stalls to learn about products and services. Users can also download promotional documents and participate in seminars. Additionally, they can purchase products and services directly from the stalls. To enhance the overall experience, the platform supports customized branding assets and audiovisual elements. Separate game zones can also be included based on specific requirements.

360 Virtual Experience

360-Virtual-Showroom

Client: HATIL

Project Date: 2020

Description:

A 360 virtual showroom is an effective solution for businesses to welcome customers to explore their showroom from the comfort of their own homes. This WebGL-based solution is developed using multiple panoramic images from different hotspots, replicating the features of a physical showroom. Users can access the virtual showroom from the business website and navigate through it to learn about products and services. They can also purchase products and services directly from the showroom, with a seamless redirect to the product page for completing the purchase. To enhance the overall experience, customized branding assets and audiovisual elements can be integrated as needed.

Brahmanbaria-Virtual-Exhibition

Client: Aamrai Brahmanbaria

Project Date: 2020

Description:

The Brahmanbaria Virtual Exhibition is an effective solution for hosting photo exhibitions online for the Aamrai Brahmanbaria Organization. This WebGL-based platform utilizes multiple panoramic images from various hotspots, replicating the features of a physical exhibition. Users can access the virtual exhibition from any website and explore it to view interactive arts created by students. To enhance the experience, the exhibition includes customized branding assets, voiceovers, and a background score. The entire environment is created in 3D to produce immersive panoramic shots. Additionally, the experience features a dedicated Bangabandhu corner and highlights significant and popular places in Brahmanbaria.

British-Council-Virtual-Exhibition

Client: British Council

Project Date: 2020

Description:

The British Council Virtual Exhibition is an effective solution for hosting photo exhibitions online, showcasing UK-based photographs from the 1971 Liberation War. This WebGL-based platform is developed using multiple panoramic images from various hotspots, replicating the features of a physical exhibition. Users can access the virtual exhibition from any website and navigate through it to explore interactive artworks from the British Council archive. To enhance the experience, the exhibition includes customized branding assets, audio voiceovers, and a background score. The entire environment is rendered in 3D to create immersive panoramic views. Additionally, the exhibition features significant interviews with authors and freedom fighters, adding depth and context to the displayed photographs

App Development

Anti-Tobacco-Survey-App

Client: National Heart Foundation

Project Date: 2018

Description:

The project aimed to conduct an Anti-Tobacco Survey on Youth for the National Heart Foundation (NHF), with support from the Centers for Disease Control (CDC). In 2020, NHF adapted the survey to focus on hypertension and sodium. To streamline the data collection process and ensure smooth operation, we implemented a digital automated system. This digital survey system minimizes human errors and enhances data security.

I have developed a mobile application for conducting the survey, featuring color-coded multiple-choice questions and guided multilingual voiceovers for adolescent interviewers. To ensure the survey runs smoothly in rural areas, I've integrated an asynchronous syncing system that effectively manages data between offline and online databases. The app also includes a resume feature to handle interruptions caused by app crashes.

Additionally, the survey automation solution integrates with a web-based Admin System, providing a comprehensive solution for managing the entire survey process.

Corona-Tracker-App

Client: Bugbite Studio

Project Date: 2020

Description:

I have developed a WebGL-based application for a Corona Tracker dashboard, designed to provide real-time updates on global infection status. The application integrates open-source API endpoints to deliver accurate and up-to-date data on COVID-19 cases across countries worldwide. In addition to tracking infection rates, the app features a comprehensive knowledge base with precautionary guidelines to help users stay informed and safe.

The application is built to be fully responsive, ensuring optimal performance across various web browsers and devices. Its intuitive interface allows users to easily navigate and access detailed information about the pandemic. To enhance user experience, the app includes interactive visualizations and charts that present data in a clear and engaging manner. Overall, the WebGL-based Corona Tracker dashboard serves as a valuable tool for monitoring the pandemic while promoting public health awareness.

TBO-Warehouse-Scanner-App

Client: Top Brand Outlet, UK

Project Date: 2021

Description:

The TBO-Warehouse Scanner App is a sophisticated dual-application solution tailored to enhance the shelving and picking processes for Top Brand Outlet (UK), a leading e-commerce brand. This advanced system streamlines warehouse operations by enabling users to shelve and pick products with precision, leveraging scanning technology to minimize human errors and improve efficiency. The application communicates with the main warehouse management system server through robust API connections, allowing real-time data updates and synchronization.

By integrating a mobile RFID scanner, the app ensures accurate and swift scanning of product SKUs, facilitating smooth warehouse workflows. The system supports seamless tracking and management of inventory, significantly reducing manual handling and optimizing overall operational effectiveness. Additionally, the app provides a user-friendly interface and real-time feedback, further enhancing productivity and accuracy in warehouse operations.

Bugbite-App

Client: Bugbite Studio

Project Date: 2019

Description:

Bugbite App is a mobile application designed to showcase the company's portfolio and services. Developed using a hybrid development platform, the app incorporates native features during the onboarding process, including login, registration, password recovery, and login options via phone, email, and Facebook. The app also features a dashboard system with user profiles.Additionally, Bugbite App is integrated with a web-based admin panel, which allows for the management of user profiles, content, and the sending of customized app notifications.

AR

Automotive-AR

Client: Bugbite Studio

Project Date: 2017

Description:

With the Concept Automotive AR App, exploring cars becomes an innovative and immersive experience. You can position the augmented reality (AR) car anywhere—whether in your living room, showroom, on the road, or in front of your garage—at any time. This app offers a unique way to experience vehicles,

allowing you to explore, select, and customize 3D models of the latest automobiles according to your preferences.

View the cars from all angles in stunning detail, control features such as lights and music, and choose your favorite color. The app even provides the option for a virtual test drive in augmented reality, enabling you to experience the vehicle as if it were right in front of you. This cutting-edge technology transforms the car buying process, offering a comprehensive and engaging way to interact with your next vehicle.

Belgravia-AR

Client: Navana Real Estate

Project Date: 2022

Description:

A real estate-based AR project by Navana Real Estate, Belgravia showcases their premium projects to clients. The app features an augmented reality (AR) solution to visualize a photorealistic 3D model of Belgravia using a brochure marker. The AR app includes several unique features, such as a dynamic environment with crowd and vehicle simulations, vegetation, a dynamic day and night cycle, a water system that adapts to lighting conditions, and clouds that change over time.

From an optimization perspective, the app uses refined models and an interior depth shader for building windows, creating a parallax view from the outside without the need for additional 3D models. Additionally, the app offers a mode for a first-person walkthrough of the interior and provides a comprehensive 3D model view of the entire building.

Brahmanbaria-AR

Client: Aamrai Brahmanbaria

Project Date: 2019

Description:

I have developed an augmented reality-based mobile application that showcases seven significant places in Brahmanbaria district within a virtual 3D environment. This AR app features interactive audio voiceovers and visual elements, creating a unique experience. It includes dynamic elements such as vegetation simulation, a day-night cycle, and clouds that change over time. From an optimization standpoint, the solution employs refined models to ensure smooth performance.

I was featured in the local newspaper "Prothom Alo" for our work on this augmented reality mobile application, which was created for the event "Titasher Tarunno" in 2019.

Brentwood-AR

Client: Navana Real Estate

Project Date: 2023

Description:

A real estate-based AR project by Navana Real Estate, Brentwood AR is designed to showcase their premium projects to clients. This application allows users to visualize a photorealistic 3D model of Brentwood using a brochure marker. The AR app includes several unique features, such as a dynamic environment with crowd and vehicle simulations, vegetation, a dynamic day and night cycle, a water system that adapts to lighting conditions, and clouds that change over time.

From an optimization perspective, the app employs refined models and an interior depth shader for building windows, creating a parallax effect from the outside without additional 3D models. Additionally, the app provides a mode for first-person walkthroughs of the interior and offers a comprehensive 3D model view of the entire building.

Ocubil-AR

Client: Square Pharmaceuticals Ltd

Project Date: 2018

Description:

This augmented reality-based application was developed to introduce the features of medicine through an engaging audio-visual presentation for enhanced understanding. Initiated by Square Pharmaceuticals Ltd., the app aims to educate in-house medical representatives and facilitate unique communication with doctors about their products.

Upon scanning the medicine, the app presents a 3D model of the product along with detailed 3D motion graphic animations illustrating the medicine's composition and benefits. A guided voiceover complements these visuals, providing comprehensive information about the medicine in a clear and interactive manner.

VR

AUTOMOTIVE-VR

Client: Bugbite Studio

Project Date: 2017

Description:

My developed Automotive VR solution offers a highly realistic experience for the automotive industry. Customers can now virtually view any car model and explore various features directly from the showroom. The solution allows users to view the vehicle from both the outside and the inside in VR. Additionally, users can change the available colors and view specifications for their desired vehicle from the catalog.

BANGABANDHU-MUSEUM-VR

Client: MagicSoft

Project Date: 2022

Description:

This project was developed in 360 Virtual Reality to honor the memorable significance of Bangabandhu Sheikh Mujibur Rahman. Users will be able to experience a high-quality 360-degree virtual environment of the Bangabandhu Museum. The museum showcases the contributions of Bangabandhu throughout his lifetime, presenting historical elements from different periods of his life.

Significant video and audio voiceovers enhance the immersive experience. Users can navigate the museum by selecting hotspots and pop-ups to access detailed audio and video information about various objects. The Bangabandhu Museum VR experience is available on Oculus VR, Google VR, and also runs on mobile devices without the need for a VR headset.

MEDILAB-VR

Client: Bugbite Studio

Project Date: 2022

Description:

One of my notable projects is Medilab VR, a platform designed to revolutionize the learning of human anatomy. This immersive VR experience allows students to explore high-detailed 3D models of the human body with precise labels, enhancing their understanding in a virtual lab setting. Medilab VR makes learning engaging and efficient, offering a comprehensive educational experience without the need for a physical lab.

TOSHAKHANA-VR

Client: MagicSoft

Project Date: 2024

Description:

I have developed interactive experience of the Bangabhaban Toshakhana Museum for VR allows users to visit the museum virtually. This project, initiated by the ICT Division of Bangladesh, uses 360 Virtual Reality technology to celebrate the historical significance of the Bangabhaban Toshakhana Museum. Users can explore a high-quality 360-degree virtual environment of the museum, experiencing its interactive storytelling and immersive features.

The Bangabhaban Toshakhana Museum VR is available on Oculus VR, Google VR, and also runs on mobile devices without the need for a VR headset. This project is expected to be a milestone for the Bangabhaban Toshakhana Museum and a valuable asset for the Government of Bangladesh.

VR-INTERIOR-CONFIGURATOR

Client: Bugbite Studio

Project Date: 2018

Description:

Virtual reality is rapidly emerging in the market through its applications in games, video entertainment, retail, real estate, education, healthcare, and more. Big companies in these sectors are increasingly turning to VR technology to digitize their advertisements and product showcases.

With this in mind, i have developed a solution for real estate, interior design firms, furniture companies, and paint companies, allowing them to introduce their customers to a new world of immersion. My developed solution not only features a virtual tour of the interior but also provides the capability to completely customize the space for its users.

Bangabandhu Satellite VR

Client: Digital Fair 2020

Project Date: 2020

Description:

The Bangabandhu Satellite VR 3D is a virtual reality simulation I've developed for Digital Fair 2020, showcasing the cinematic journey of the Bangabandhu satellite. Deployed on HTC Vive, the simulation allows users to experience the mission from a first-person perspective, highlighting its significance to the nation. The cinematic VR journey, created entirely in 3D, features the launch of the Falcon rocket, the separation phase, and the deployment phase in an immersive view. Additionally, users learn about the satellite's importance and its operational timeline.

Game

Node-9

Client: Self

Project Date: 2018

Description:

Node 9 is a puzzle-based casual 2D game. The game mechanic involves connecting a total of nine nodes with a line without overlapping. The sequence in which the nodes are selected is generated randomly, making each level unique. The game features multilingual support and includes ad network implementation.

SIXER

Client: Bugbite Studio

Project Date: 2021

Description:

Sixer is a 2.5D flick cricket game where players use finger flicks to score runs from the incoming ball. The challenge is that the ball swings randomly, so players must anticipate where it will turn. The game features branding placements and a team selection process during onboarding.

ACME-Raffle-Draw

Client: ACME

Project Date: 2024

Description:

I have developed an automated raffle draw system for Bashundhara Group to help organizers initiate raffle draws efficiently. My system processes participants' information and gift item details from CSV inputs and automatically generates a dynamic raffle draw. The range for selecting winners can be easily adjusted according to requirements. The system produces a list of winners in a CSV file, which organizers can use as needed. Additionally, it features audio and visual effects to make the raffle draw entertaining throughout.

Bashundhara-Raffle-Draw

Client: Bashundhara Group

Project Date: 2024

Description:

I have developed an automated raffle draw system for Bashundhara Group to help organizers initiate raffle draws efficiently. My system processes participants' information and gift item details from CSV inputs and automatically generates a dynamic raffle draw. The range for selecting winners can be easily adjusted according to requirements. The system produces a list of winners in a CSV file, which organizers can use as needed. Additionally, it features audio and visual effects to make the raffle draw entertaining throughout.

DHL-Raffle-Draw

Client: DHL

Project Date: 2024

Description:

I have developed an automated raffle draw system for DHL that helps organizers initiate raffle draws effectively. My system processes participants' information and gift item details from CSV inputs and automatically generates a dynamic raffle draw. The range for selecting winners can be easily adjusted based on requirements. The system produces a list of winners in a CSV file, which organizers can use as needed. Additionally, it includes audio and visual effects to make the raffle draw entertaining throughout.

Interactive Apps

Interactive-Catch-Game

Client: Digital Fair 2020

Project Date: 2020

Description:

The interactive catch game solution allows consumers to engage with a brand by catching brand goods using their hands. Consumers must catch goods falling on the screen while avoiding hazards to maintain their game lives. Motion sensors are used to detect hand movements and create the experience based on that. The experience is fully customizable and can be branded according to preference.

Interactive-Match-Game

Client: Bugbite Studio

Project Date: 2023

Description:

The Interactive Match game solution allows consumers to interact with brand products by matching similar brand goods using hand gestures. Consumers need to match similar products on the screen and align all the tiles within a minimum time to score. Motion sensors are used to detect hand movements and create the experience based on that. The experience is fully customizable and can be branded according to preference.

Interactive-Penalty-Shootout

Client: Bugbite Studio

Project Date: 2022

Description:

The Interactive Penalty Shootout is a new creation designed to ignite genuine football excitement for both young and old. The Kinect device tracks the user's body movements as the controller, while the goalkeeper is displayed on the projector/screen. When the player kicks the air, the Kinect camera system detects the movement and calculates the direction and force of the shot in real time. Our game system then activates the 3D-animated goalkeeper, who attempts to block the ball. The only real element in this Virtual Penalty Shootout is the player's foot; everything else—the ball, the goal, and the goalkeeper—exists only virtually on the screen.

Interactive-Photobooth-BG-Replace

Client: HUAWEI

Project Date: 2016

Description:

As interactive photobooth experiences are a powerful medium for brands to engage with consumers through campaigns and activations, I have refined my expertise to provide enhanced photobooth solutions. My developed photobooth features a background replacement segment that allows users to replace the background in their camera feed. Users can select any background from the app using hand gestures and capture a selfie photo. Finally, users can share their branded photo via email or by scanning a code to download it.

Interactive-Photobooth-Magazine-selfie

Client: Bugbite Studio

Project Date: 2023

Description:

Interactive photobooth experiences are a powerful medium for brands to engage with consumers through campaigns and activations. I have honed my expertise to provide exceptional photobooth solutions. My developed Photobooth Magazine Selfie feature allows users to take selfies with a magazine overlay. Users can select any magazine overlay from the app using hand gestures and capture their selfie. Finally, users can share their branded photo via email or by scanning a code to download it.

Interactive-Photobooth-Selfie-with-Star

Client: Bugbite Studio

Project Date: 2024

Description:

Interactive photobooth experiences offer brands a powerful way to connect with consumers through campaigns and activations. I have refined our expertise to deliver outstanding photobooth solutions. My developed "Selfie with Star" feature allows users to take a selfie with an augmented celebrity. Users can select from a range of superstars using hand gestures and capture their photo. The final branded image can be shared via email or downloaded by scanning a code.

Interactive-Runner-Game

Client: SCB

Project Date: 2022

Description:

The interactive Infinite Runner game is similar to Temple Run or Subway Surfer but designed as a real-life, life-sized experience. Players move in front of a giant screen to control the character on-screen. I have developed the game using motion tracking cameras to detect body movement and apply game mechanics. There are numerous opportunities for branding throughout the level, as the game is fully customizable.

Interactive-Wall-Product

Client: HATIL

Project Date: 2023

Description:

Capture the attention of a large audience. The wall displays product information when a user approaches the screen, with the content adjusting based on the user's position in front of it. My developed interactive wall product is highly effective for brands looking to promote their products with dynamic displays. Everything, from animation design to branding visuals, is fully customizable in my solution.

Interactive-Wall-Timeline

Client: Digital Fair 2020

Project Date: 2020

Description:

The interactive timeline wall is a standout feature at activations and fairs, designed to engage large audiences. As users approach the screen, it dynamically displays information based on their position. This solution is perfect for brands wanting to highlight their achievements, growth, or any chronological content. My developed interactive timeline wall offers complete customization, from animation design to branding visuals, ensuring a tailored experience for each brand.

PhysioTrack

Client: Interactive Artifact

Project Date: 2016

Description:

A guided physiotherapy assessment system that involves computer vision technology using Kinect device to detect body joints. The application calculates angle to determine the proper quality of exercise done by patients prescribed by doctors. The application provides digital assessment report on exercises done by patients. Patient data was maintained securely though database and application process data though API endpoints.

Patients can do selected exercises from this module. A 3d model will demonstrate the exercise and patient needs to do the exercise accordingly. Patient's body angle of that exercise will then track through Kinect depth camera and based on that, a repetition counter will count the exercise upon reaching the desired angle of the relevant exercise. Additionally, a strength indicator of angles, a time feedback of doing exercise, repetition counter, angle value & exercise name are some components that are present in this module. After successfully completing an exercise, a UI will pop up to redirect the user to the dashboard & sending data to database.

Patient can access to the exercise selection module, Exercise summary module, Report generation module & settings module.