

Audax Labs Introduction

Product Engineering Services

Our Capabilities & Experience

Audax labs is an Innovation Partner with a strong System Integrator background. We work with enterprise in their innovation journey from ideation to enterprise grade deployment.

PARTNERS

HITACHI
Inspire the Next

Gold
Microsoft
Partner


 **Partners**

 Google Cloud
Partner

CUSTOMERS

HITACHI
Inspire the Next

 Microsoft





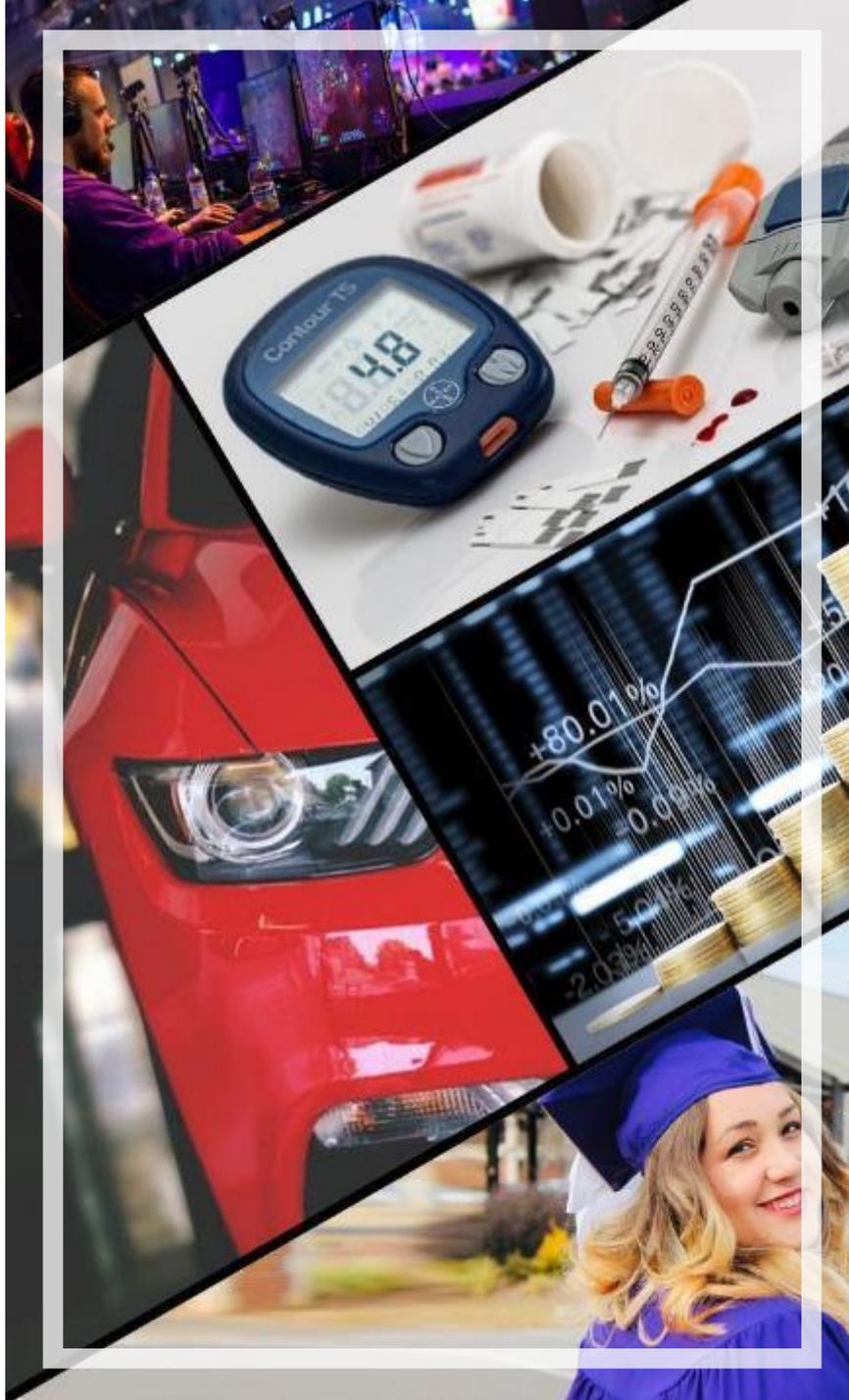
 LiveWire





 Kelvin





INDUSTRIES

 Automotive

 Manufacturing

 Healthcare

 BFSI

 Retail

TECHNOLOGIES

 **AI**
Artificial Intelligence

 **AR, VR, & XR**
Augmented Reality

 **IoT**
Internet of Things

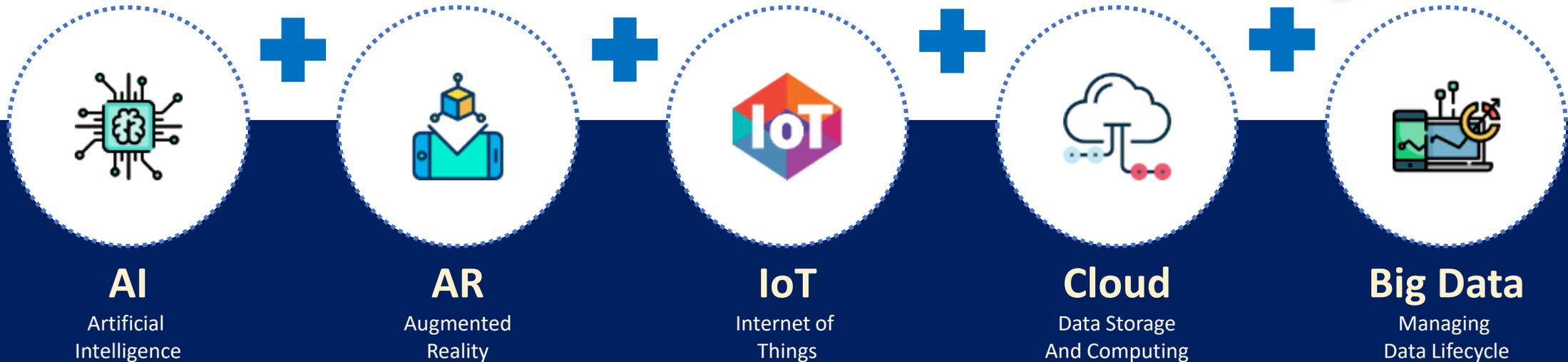
 **Cloud**
Storage & Computing

 **Data**
Managing Data lifecycle

GLOBAL PRESENCE



Making Enterprise Smarter Leveraging Outcome Driven Innovation!



Traditional Technologies





Product Engineering Capabilities

Engineering innovation into every product

Product Engineering Services

Technologies

Cloud (Azure, AWS, GCP)

- OpenAI, Bard, Cognitive Services, Machine Learning, Computer vision, Azure IoT Hub, Edge IoT, Data Analytics, Datalake, Digital Twin, DevOps, AR, VR, Metaverse, Maps services

Front End and Back End

- J2EE, .NET, Python, Golang, Unity, ReactJS, AngularJS, Node JS, Web Logic, Tomcat, JBoss, MQ Series

Databases

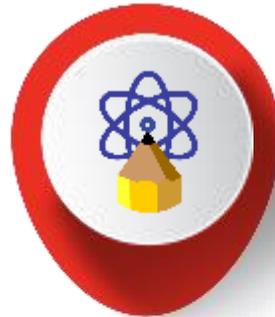
- Oracle, Azure SQL, MySQL, Maria DB, DB2, Mongo DB, PostGre SQL

Mobile

- iOS, Android, Windows

Strategy Consulting

- POC & Technology Evaluation
- Functional Consulting
- Testing Strategy



Product QA & Testing

- Testing Process
- Tools Selection
- Functionality Testing
- Usability Testing
- Performance Testing
- Code Reviews



Product Transformation

- Reengineering
- Migrating to new technologies
- Apps Server & Database Migration
- Portfolio Modernization



Core Product Development

- Requirements Scoping
- Architecture Design
- Prototyping
- Testing
- DevOps
- Release Planning & Management



Production Support & Maintenance

- Level 1/2/3 Support
- Bug fix & Patch Mgmt.
- Service Pack upgrade
- Technical & Functional Enhancements
- Performance Tuning & Optimization
- End of Life support



Value Added Services

- Product Integration Services
- Internationalization & Localization
- Technical Documentation
- User Interface design

Audax Labs' Experience

Our Products

DataBeagle

eDiscovery solutions

CONTENT LENS
Powered by Audax Labs

Intelligent document processor

HIDO

Data Insights and ROT Analysis

SMART OCR

Transforming text into valuable insights

Augmently

AR experience for various industries

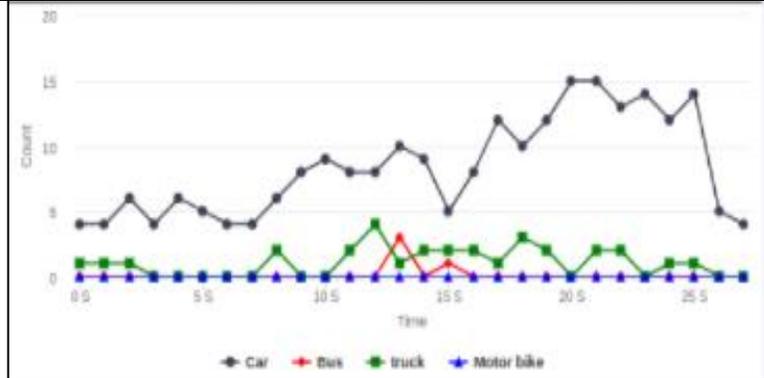
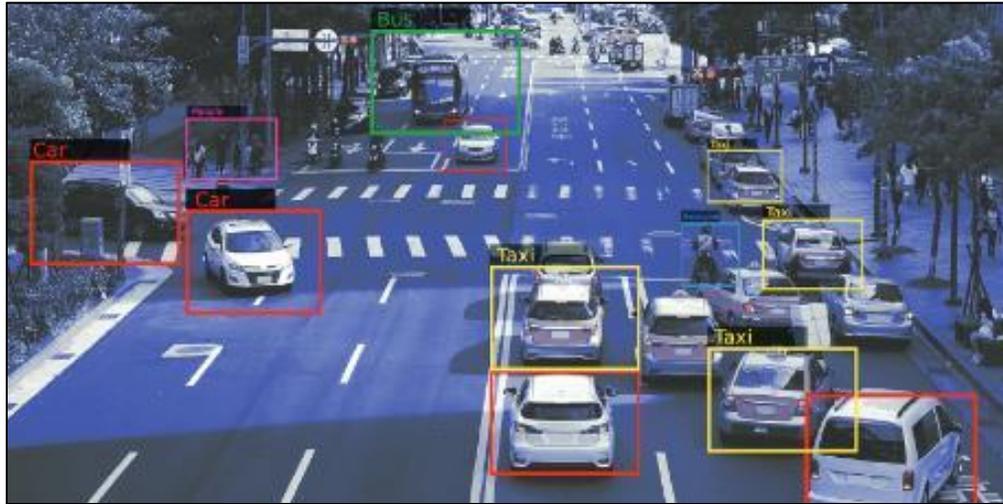
3D Builder

Photo realistic customizable products

Product Engineering engagements

- **Digital Advisor** for a fortune 100 customer
- **Indoor Atlas** for Microsoft
- **Traffic Control monitoring for Microsoft**
- **Falkon** for Mexico based Wealth Management company
- **AR Assist** – AR Boat configurator and virtual boat tour for a large US based wake boat manufacturer
- **Retail Catchment** (Bing maps solution)
- **Locate charging stations** (Bing maps solution) (Bing maps solution)

AI based solution for Traffic Monitoring



Solution Component:



Problem:

Customer wants to monitor traffic at traffic lights as per defined categories of vehicles. In addition, system should be able to detect accident scenarios and bad road condition from video uploaded or live video stream. The solution for traffic monitoring was required by Microsoft for their smart city project.



Solution:

Audax Labs developed computer vision based machine learning model to identify vehicle as per defined categories, detect accident scenarios, and bad road scenarios. The solution was implemented for both uploaded videos and live video stream.

The solution provided a dashboard to show traffic data in graphical view for analytical purposes.



Benefits:

- Smart traffic management
- Automated alerts for accident or road repair need
- Efficient traffic monitoring and decision making
- Reduced cost

AI based Image Based Inspection

Predictive Maintenance for Energy utility company



Problem:

Electricity tower inspection for maintenance is a dangerous, expensive, and time-consuming processes for utility companies. Energy utility company's requirement is an automated and integrated platform for finding defects from inspection images.



Solution:

- Image are captured using drone for Transmission and Distribution (T&D) assets
- Images are ingested and pre-processed by the application
- AI/ML driven image-based inspection solution automates defect detection from uploaded images
- GUI for visualization and analysis
- HITL process to find model performance and re-training



Benefits:

- Automated Manual Inspections fast-tracks maintenance
- Data-management strategies to save time and money
- Help protect assets and increase safety across utility organization.



Solution Component:



Smart OCR – AI based data discovery for a large Swiss bank



Problem:

Wealth Management institution wanted to scan billions of documents for identifying sensitive information in them. They faced compliance and security risk as not much information is available about this dark data.



Solution:

Audax Labs developed an on-prem OCR solution (leveraging Machine Learning and Computer Vision) and integrated the same with a content intelligence solution for identifying sensitive information from images and .pdf objects. OCR reduce regulatory risks as it processes scanned images and pdf files to text. Customer's content intelligence solution is integrated with OCR solution to process data for scanned images. OCR plug-in supports following file format(s): PDF, BMP, JPEG, TIFF, GIF, and PNGs



Benefits:

- Data discovery and Compliance
- Data security
- Cost saving due to:
 - Saving in storage cost
 - Maintenance efforts



Solution Component:



Content Intelligence

Hitachi Content Platform

Microsoft SharePoint

NAS Storage

Parking App for Microsoft Campus



Problem:

Difficulty in finding and reserving an available parking space. After parking, finding the directions to the meeting room could be challenging and take precious time.



Solution:

Using Azure maps, users can navigate to meeting venues and find the available parking facilities in that area. Parking can be booked online and can be redeemed via QR Code.

Users can view indoor maps of the meeting venue and find the meeting room location and directions.



Benefits:

- Saves time and cost
- Allows to block car parking space
- Allows navigation to meeting venue and parking



Solution Component:

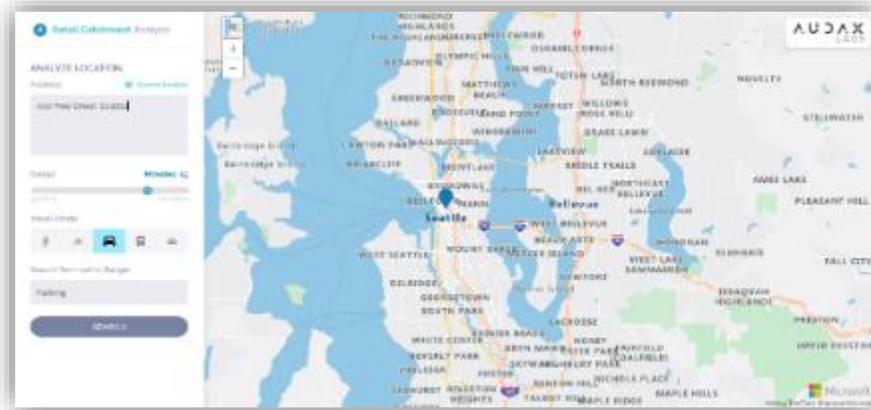


Retail Catchment Analysis



Problem:

Inventory management, Demographic challenges, Parking and traffic management challenges

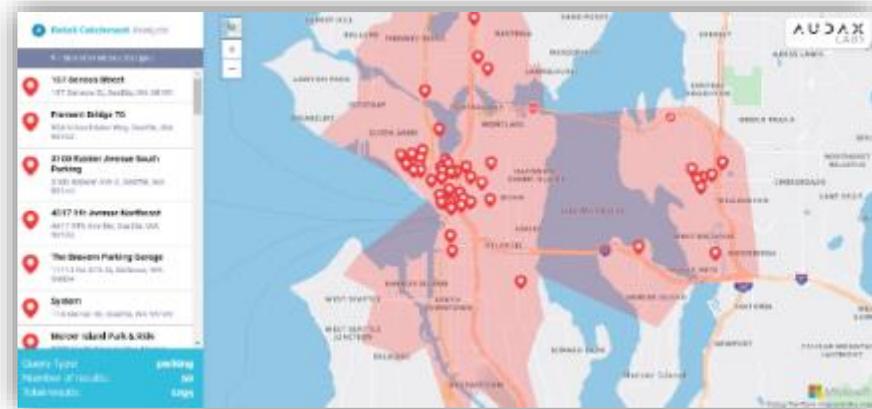


Solution:

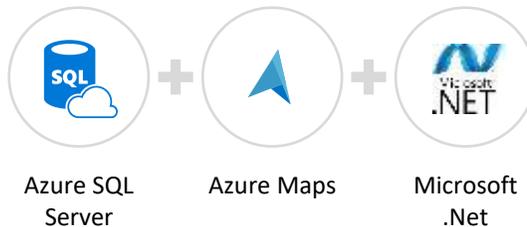
Catchment Analysis is the defined area around a store, site or venue that has a sphere of influence to draw in customers. Using Azure maps retailers can gain an insight of the locality. It allows them to gather the data related to parking availability, competitors, understand a location, and analyze business drivers and disruptors from a spatial perspective. All these factors help businesses to strategize and increase sales.

Benefits:

- Better understand business drivers and disruptors
- Search within the Isochrone to determine the demographic data
- Increase in Sales



Solution Component:

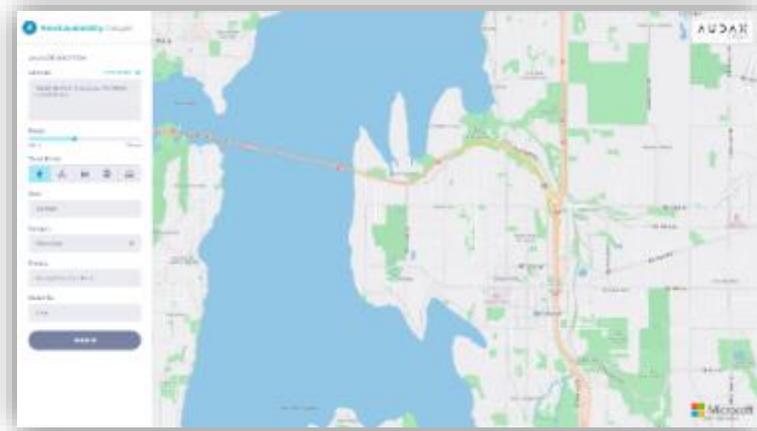


Allow customer to search product availability



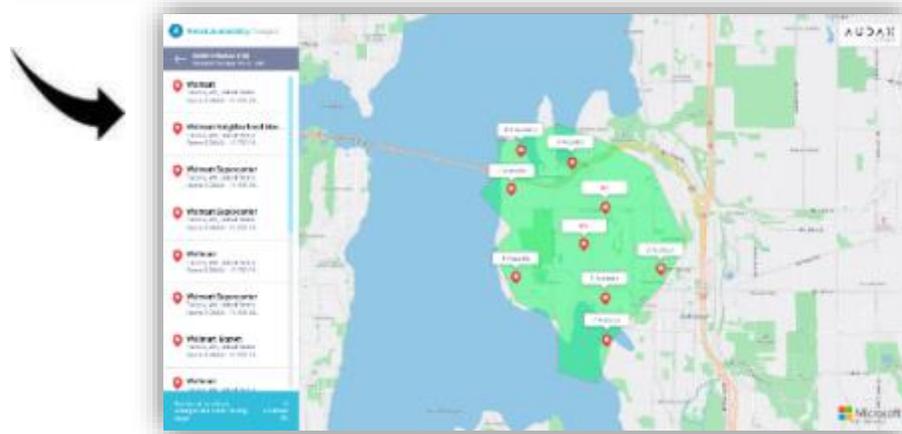
Problem:

Product availability, customer's time to find a product, lower footfall and decline in sales to ecommerce



Solution:

Assist customers in buying journey on web or mobile application. Using Azure Maps, we can help the customer search a product in their vicinity thus giving them the certainty of the product availability. Product information and inventory status can be fetched and displayed on Azure maps. Visual representation of product's availability in nearby stores can be clubbed with ongoing deals and offers to attract customer to the stores and increase sales.



Benefits:

- Improved visibility / Increased sales
- Saves time for customers / Improves experience
- Provides certainty of product availability



Solution Component:



EV Charging stations on Azure Maps



Problem:

- Locate, reserve, and pay for EV charging stations using Maps.
- EV Automotive companies want to provide their customers a capability to locate the charging stations using the Mobile/Web app.



Solution:

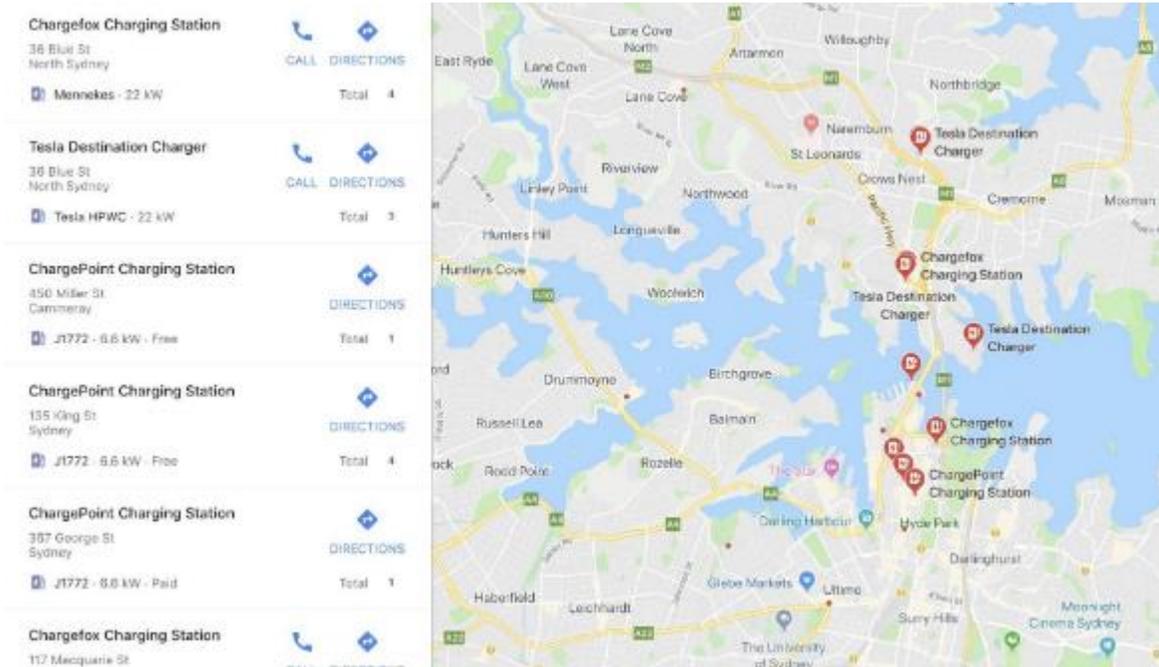
Develop an app using the capabilities of Microsoft Azure Maps, Azure Cloud, IoT, Cognitive services to locate the EV charging stations, reserve the spots and complete the payment transaction.

The app can populate a visual layer with vital information and stats such as nearby EV charging station, directions, and estimated time etc.



Benefits:

- Improved customer experience
- Saves time
- Intuitive and engaging
- Reduce stress



Solution Component:



Real time analytics and product engineering for Wealth Management company



Problem:

A Mexico based wealth management consulting for private banking and hedge funds needed a real time dashboard for their customers to provide an aggregated view of various accounts, consolidate investments, income, interest, cash flows etc. Track real time movements and risks in their accounts.



Solution:

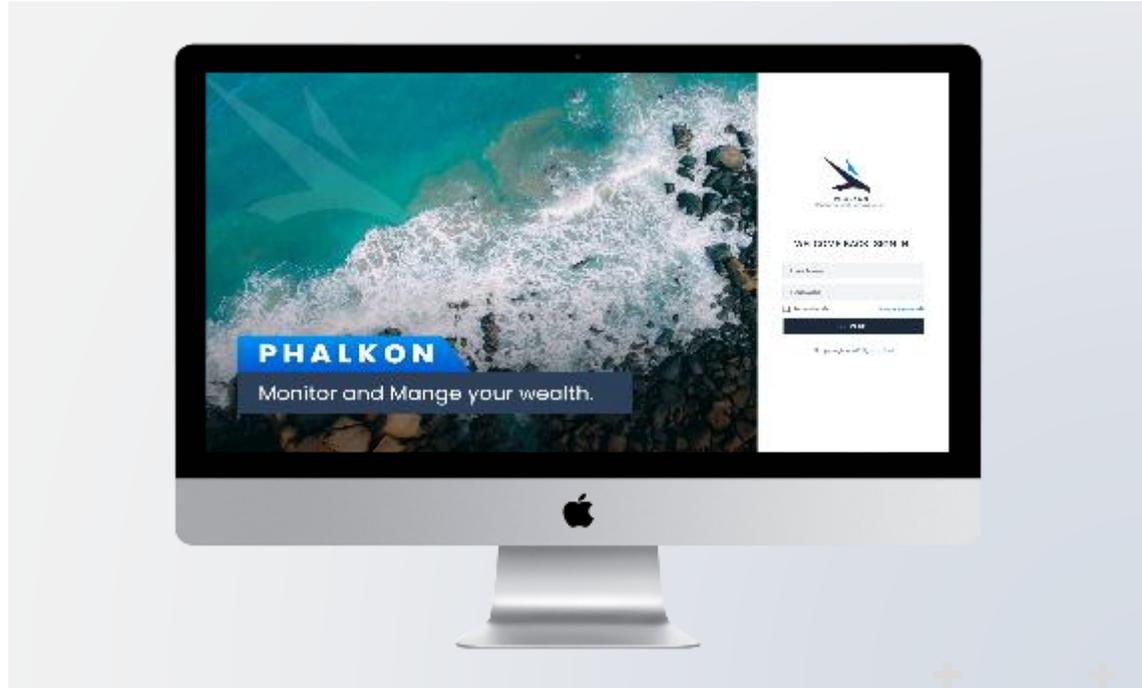
Audax Labs developed real time Power BI analytics dashboard that would provide customers with an aggregated view of their accounts, investments, income, cash flows etc. The dashboard would allow presentation of risk for hedge funds managers.

The data analytics system would allow them to query and calculate NAVs and help them collect market data on daily basis.



Benefits:

- Flexible, and easy to use dashboard
- Highly configurable
- Fast and attractive UI



Solution Component:



Supra Boat's AR App – Boat Builder



Problem:

Supra Boats wants to provide its customers a rich user experience by creating an Augmented Reality App.

- AR Experience: Build your boat in AR
- Computer Vision: Scan a boat to see the features and customize the experience



Solution:

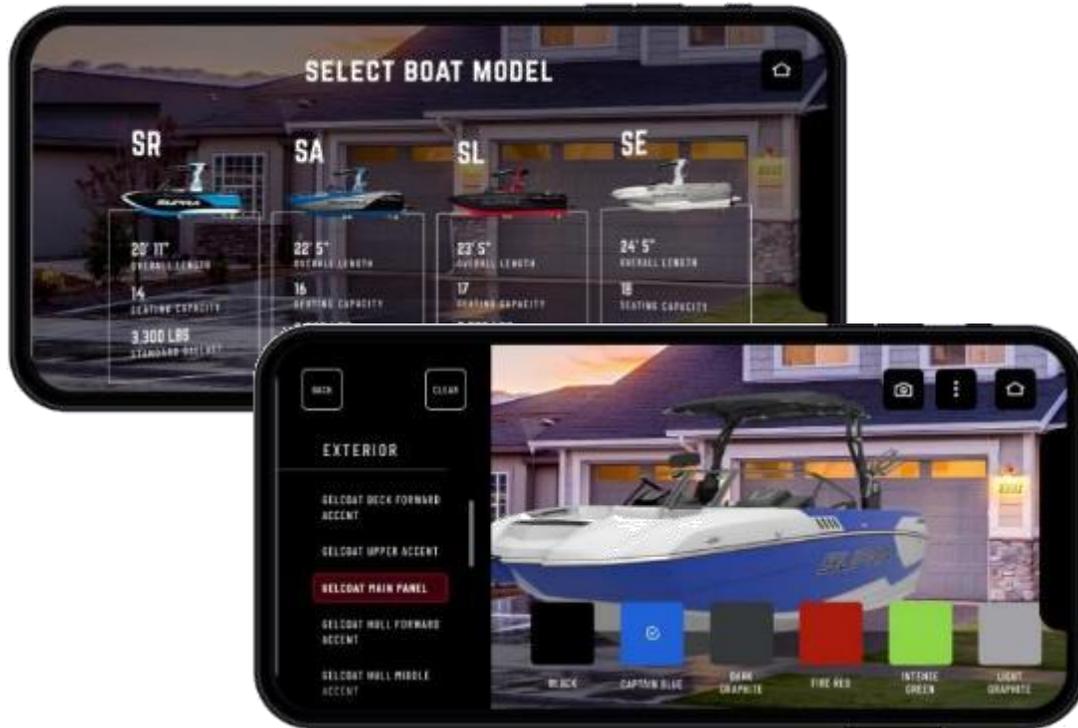
Audax Labs developed an AR Assist to:

- Scan a boat and see the POIs
- Experience an AR boat tour
- Build and customize a boat
- Share the details with a dealer / social media
- Ability to save and brand the custom boats



Benefits:

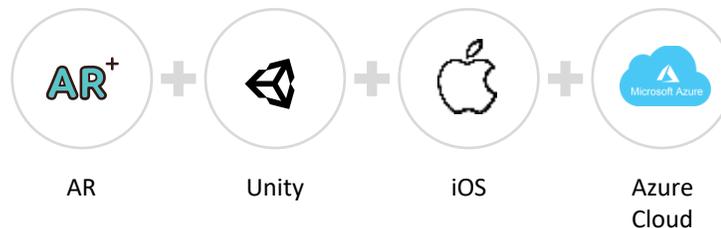
Supra AR Assist greatly enhances customer experience by visualizing the boat on water of platform of their choice (Trailer, water etc.)



<https://www.youtube.com/watch?v=zLPT2jh9ooA&t=10s>



Solution Component:



AI and AR based Custom Shoes solution



Problem:

A large US-based custom shoe and insole manufacturer would like to provide its customers with a convenient and personalized experience by eliminating the need for professional caregivers.

Currently, their products are marketed and recommended by chiropractors.



Solution:

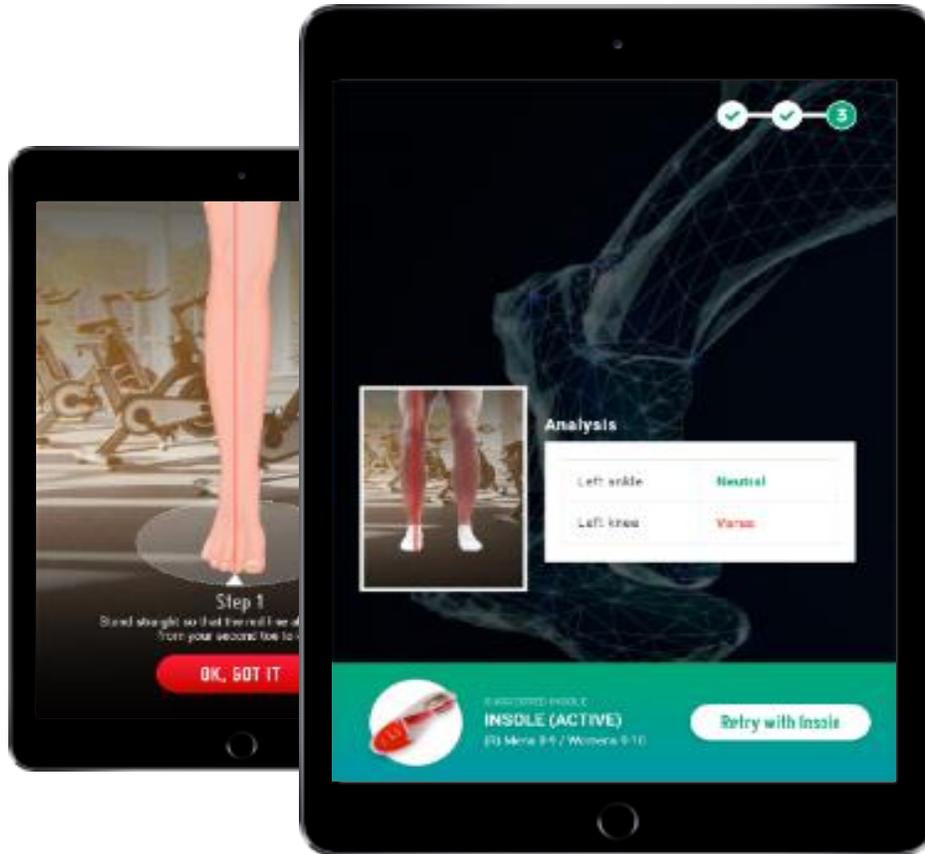
Audax Labs developed a custom show App using technologies like AI (Artificial Intelligence), ML (Machine Learning), and AR (Augmented Reality).

The app scans the feet and determine the position of ankle and feet. The app would use highly trained ML engine then suggests the best custom shoe/insole for the user.

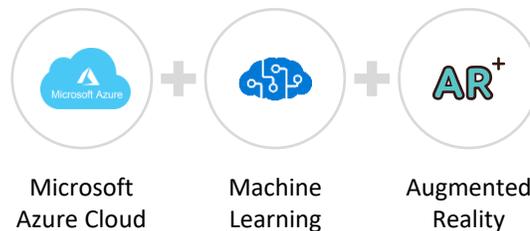


Benefits:

- No professional caregivers required
- Cost effective
- Scope of business expansion

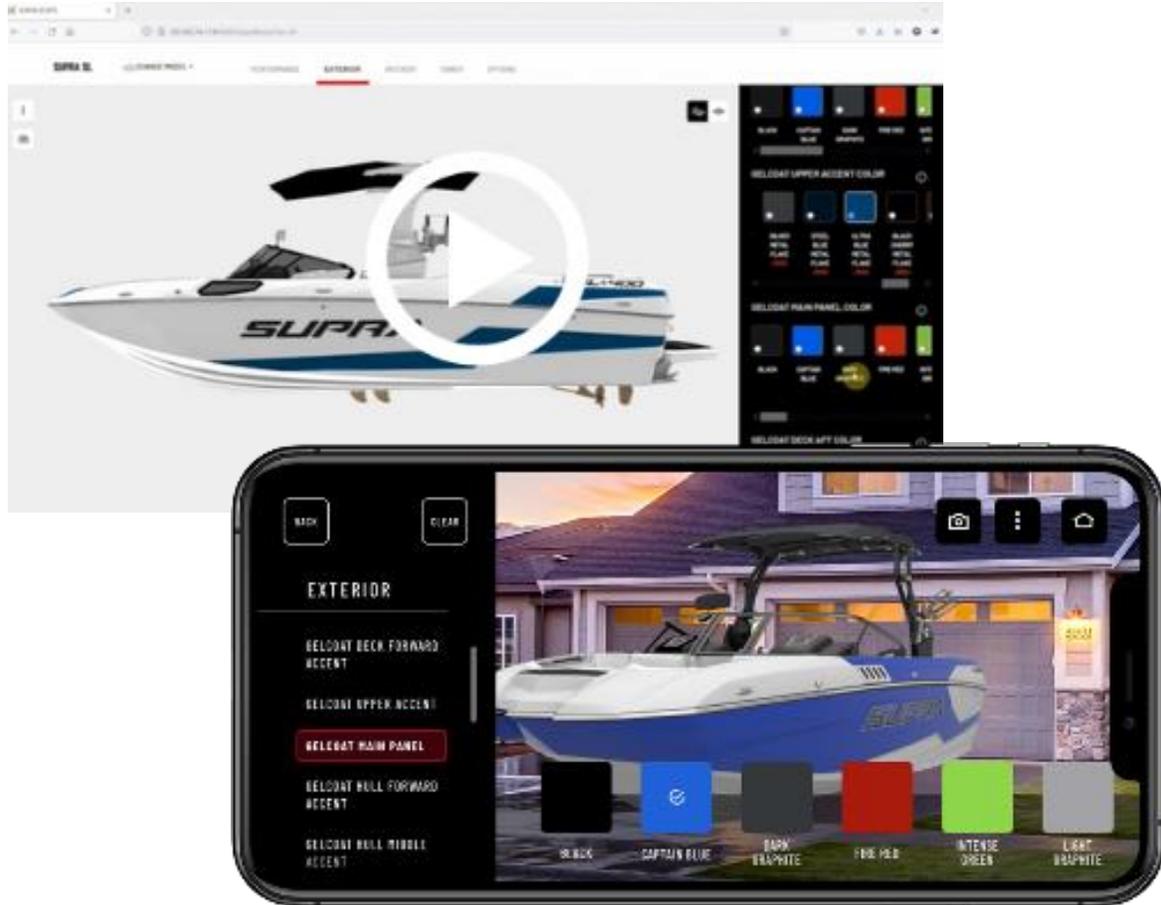


Solution Component:



Connected Boats: Convenience

Configure and order your Boat in AR



Solution Component:



Problem:

Supra Boats wants to provide its customers a rich user experience and allow them to configure the boats according to their taste and choice. They want the 3D builder to be hosted on their websites. Supra also wants to create an AR based 3D builder app that can be used on the users mobile.



Solution:

Audax Labs developed 3D Builder for Supra and Moomba boats using ThreeJS and Unity and integrated into their websites. The solution would allow users to configure a boat, save the boat, and take picture, save configurations in their CRM. Users can also share the configured boats on social media. An AR based 3D builder was also developed for mobile users.

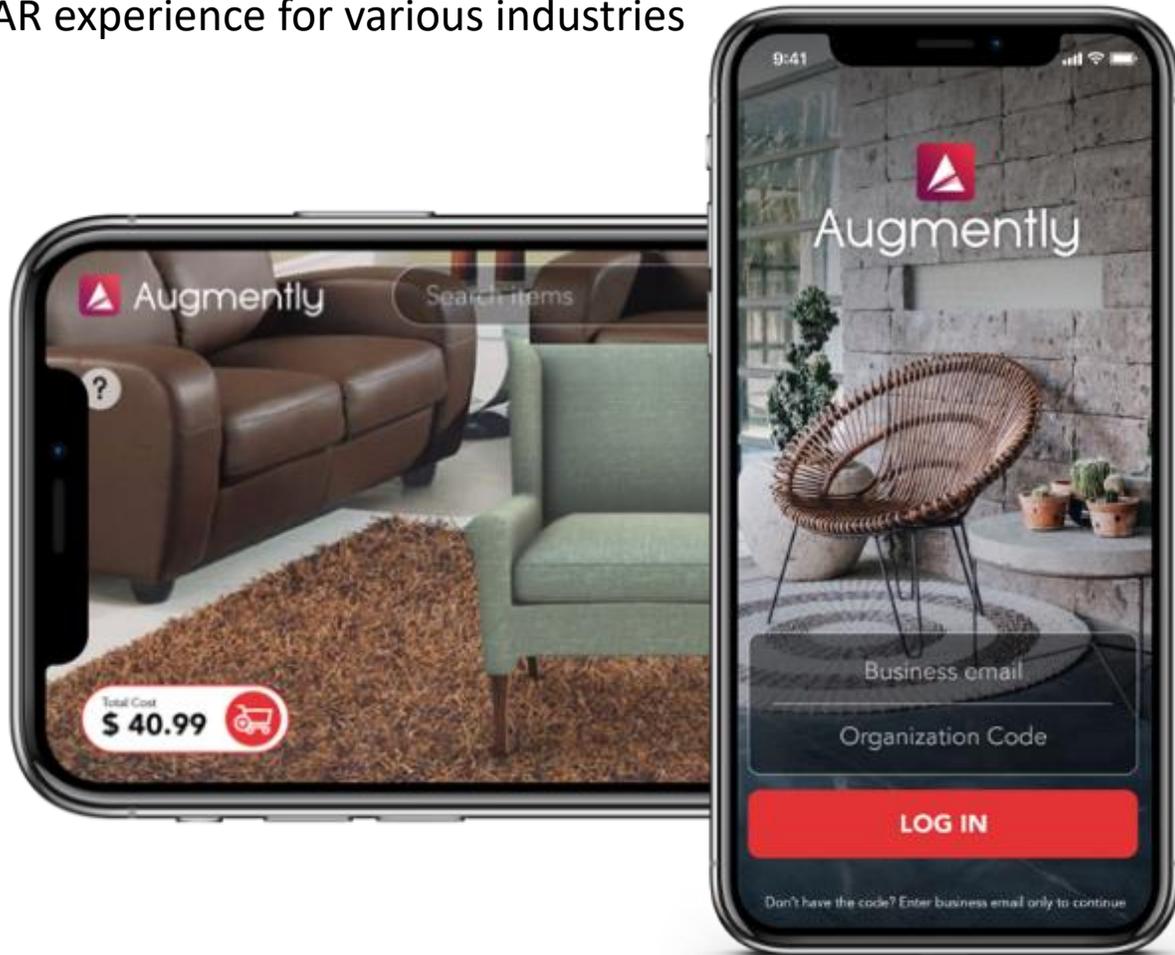


Benefits:

- Improve Brand experience
 - Increase in traffic on Supra and Moomba websites
 - Increase in sales
- Live demo available <https://www.youtube.com/watch?v=zLPT2jh9ooA&t=10s>

Connected Boats: Convenience

AR experience for various industries



Solution Component:



Problem:

To improve efficiency through the value chain by enabling interaction between the technical and business functions of organizations. Boost sales by letting end user explore and experience products in Augmented Reality environment.



Solution:

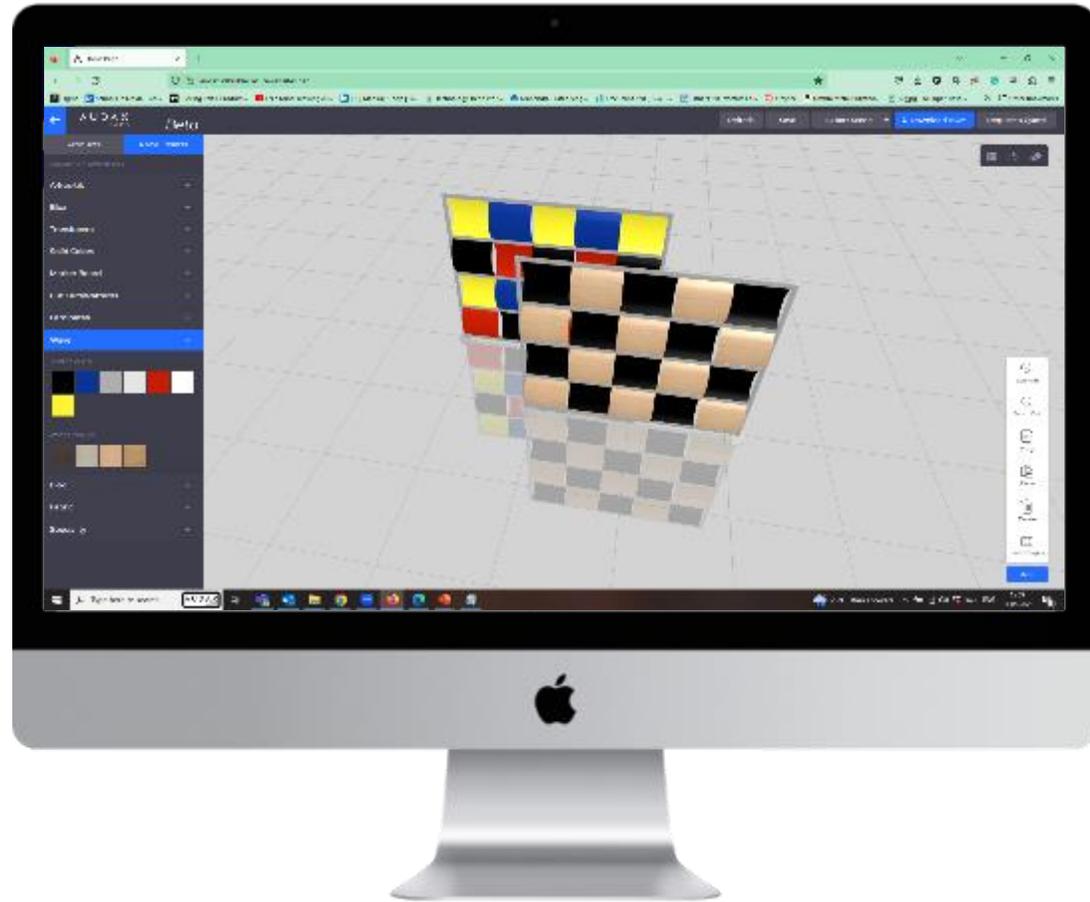
Audax Labs developed Augmently, that empowers various industries and manufacturers. Admins can use control panel to maintain product catalog, upload 3D Models and deliver amazing AR shopping experience. Back-end integration with internal applications and IT systems such as Databases, eCommerce engines and CRMs enables manufacturers to showcase and manage their products effectively.



Benefits:

- Improve brand experience
- Increase in traffic and sales
- Integration of eCommerce engines and CRMs
- Photorealistic high-quality rendering of 3D content

3D Builder



Problem:

Manufacturers and retailers want to empower their customers to be able to customize products online and share the bill of materials to manufacture the product.



Solution:

Audax Labs developed a 3D Builder cross platform tool that allows the retailers to give their customers photo realistic experience every time and on every device. Customized models render really fast and make the experience smooth. It allows to generate and share Bill of Materials instantly. Customizing Real-time 3D models makes building modular products fun and easy.

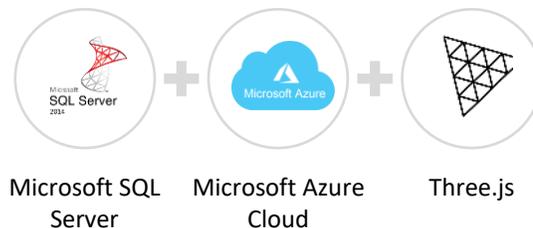


Benefits:

- Improve Brand Value
- Intuitive building flow makes complex process extremely simple
- Various configuration settings for products
- Increased sales and positive reviews



Solution Component:





Outcome Driven Innovation!
