

An aerial night view of a city skyline, featuring a prominent skyscraper on the left and a dense grid of lights across the city. A blue semi-transparent overlay covers the bottom portion of the image, containing white text.

Audax Labs Introduction

Connected Vehicles Application Development

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




KARMA

 LiveWire

 Rabobank

 9to5
seating

 Kelvin


 Parker



INDUSTRIES

 Automotive

 Manufacturing

 Healthcare

 BFSI

 Retail

TECHNOLOGIES

 **AI**
Artificial Intelligence

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

 **IoT**
Internet of Things

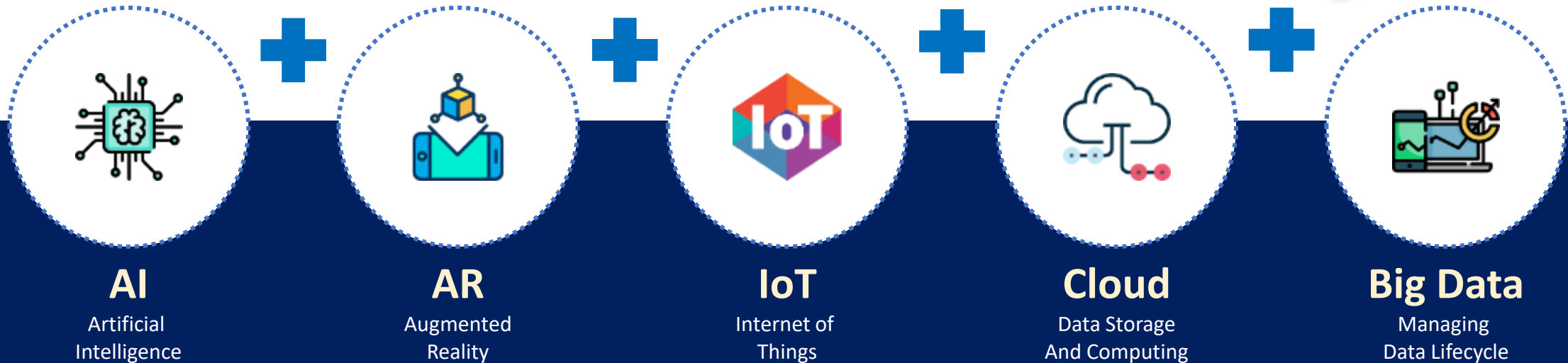
 **Cloud**
Storage & Computing

 **Data**
Managing Data lifecycle

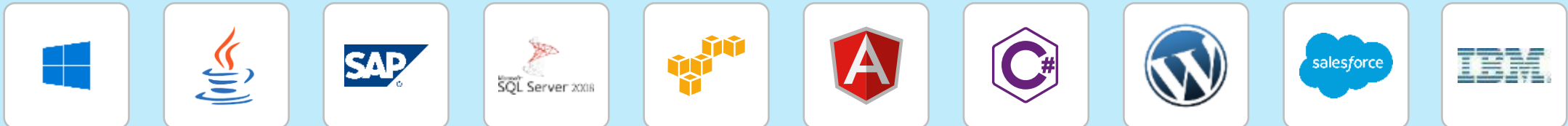
GLOBAL PRESENCE



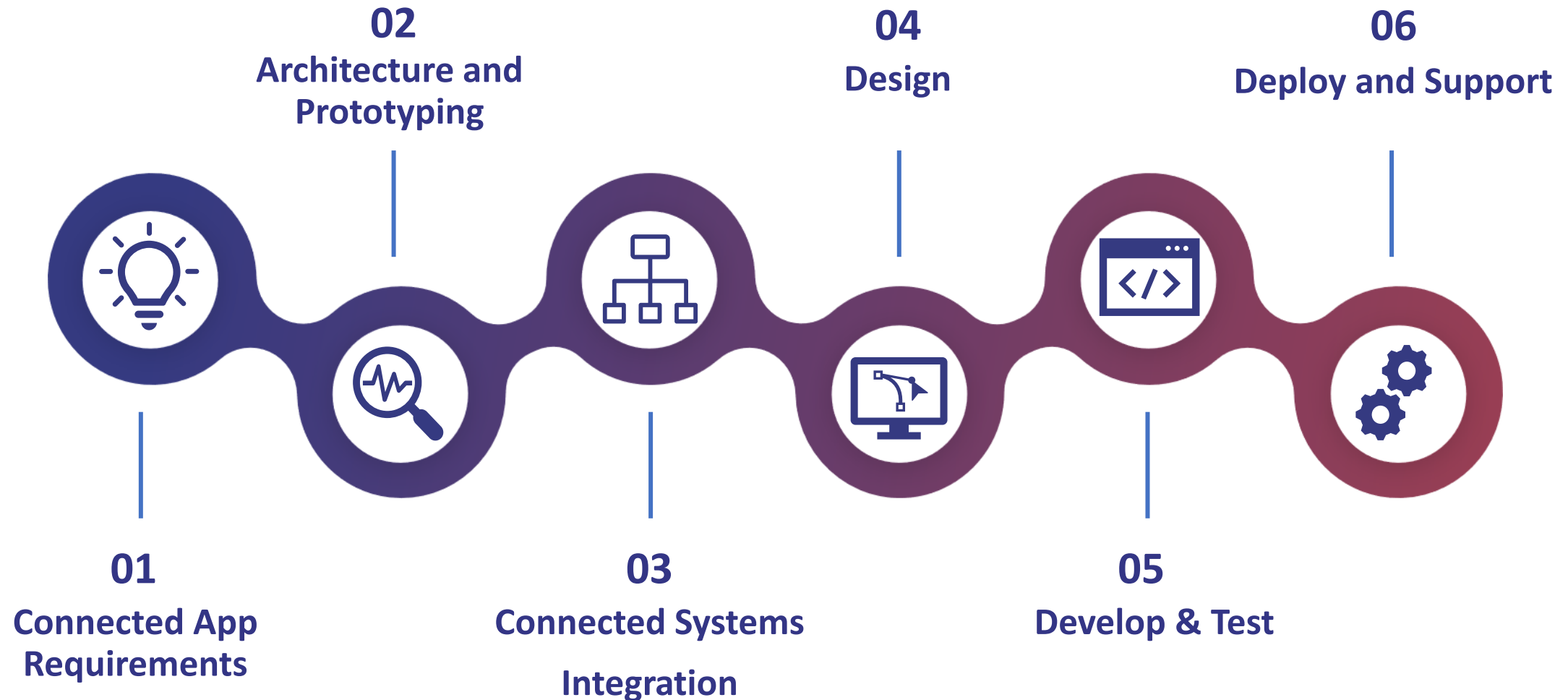
Making Enterprise Smarter Leveraging Outcome Driven Innovation!







Traditional Technologies



Connected App Development process/framework



Technologies Involved

-  iOS
-  React Native
-  Metaverse
-  Full Cycle Product Development
-  Android
-  PWA
-  DevOps
-  OTT App Development
-  Blockchain
-  Wearable
-  AI-ML Development
-  NFT Development Services
-  Flutter
-  AR VR
-  Software Development
-  Cloud Services
-  IOT
-  Data Science Analytics
-  Web Development
-  Dedicated Development Team
-  Dapp Development Services

Karma Revero Connected Car



Problem:

KARMA AUTO wanted to stay ahead of the competition by providing owners of its Revero Phev a comprehensive and rich user experience.

Karma wanted to provide a capability for their users to control their car through their mobile devices.



Solution:

Audax Labs developed “connected car” solution for Karma Automotive on iOS and Android using Karma Cloud Service with following features

- **Car Charging Status, Manage Charge Times**
- **Health and Diagnostics**
- **Locator, Roadside Assistance**
- **Privacy Mode, HVAC Control**
- **EV Range Calculator, Valet Mode**
- **Charge Station Locator**



Benefits:

- Enhanced customer experience
- Save time and cost
- Enhance safety and security
- Predictive maintenance



Connected Vehicles: Maintenance

Firmware Over the Air updates, Predictive Maintenance



Problem:

A large automotive manufacture based in US wants to provide their bike owners, the user manual in Augmented reality. Currently the owner manual is paper based and the new digital manual is required to be integrated with their existing bike connect mobile app.



Solution:

Audax Labs created a solution for the electric motor bikes by using Unity, Vuforia and native iOS.

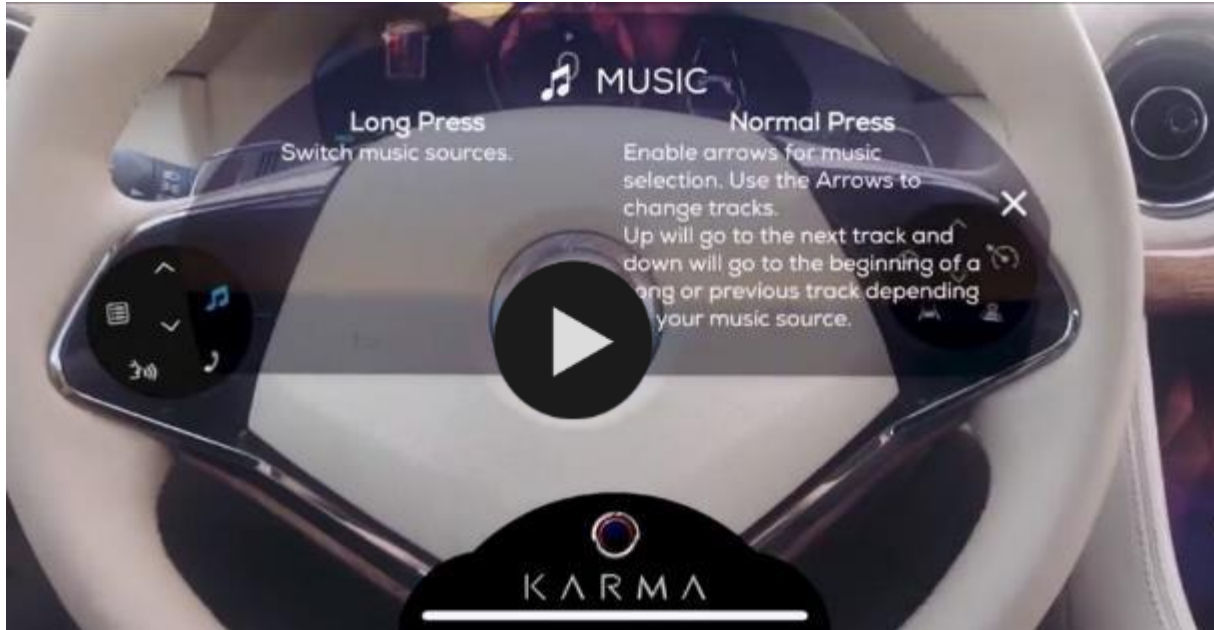
The application would enable users to scan the specific component of the bike and recognize it. The system would then render the videos or animation in augmented reality.



Benefits:

- Paperless user manual
- Saves cost & Time
- Better user experience
- Seamless updates to the manual

Karma AR Owner Manual using AR and Computer Vision



https://www.linkedin.com/posts/karmaautomotive_karmaauto-activity-6692514945319350272-tyNM/



Problem:

KARMA wanted to focus on environment friendly ways to replace the paper based owner manual for its Revero Phev model.

Karma Auto team wanted to make user manual more intuitive and engaging.



Solution:

Audax Labs developed an “AR based Owner Manual” using computer vision and Augmented Reality for Karma iOS and Android users.

Once a user scans the car’s steering wheel, all the options show up on screen. User can tap any of the options and get more insights on how to operate that function and what it does.



Benefits:

- Enhanced customer experience
- Replaces printed manual
- Easy to locate features
- Saves time and cost
- Easier to manage changes

Connected Vehicles: Digital Twin

Predictive Maintenance



Problem:

Karma Auto wants to provide their car owners with a capability to know the health of their car at anytime.

Karma wants to give users a capability to view a digital replica of their car to know various health metrics like diagnostics information of engine, tyre pressure, battery, heat etc.



Solution:

Audax Labs developed a mobile app leveraging IoT and AR capabilities that allows users to know diagnostics information of the car instantly.

It also enable users to track their service and warranty to schedule their service with nearest dealership. The app is built on iOS and Android to using Karma Cloud Service (vehicle control & monitoring) with various function.

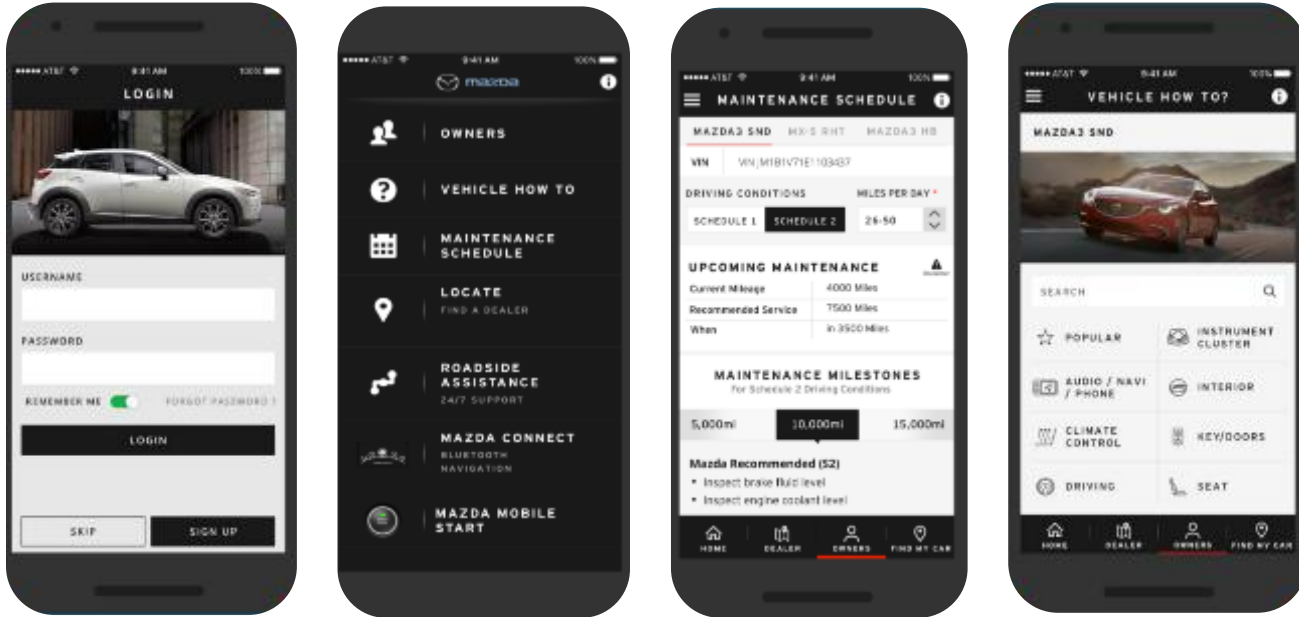


Benefits:

- Enhanced customer experience
- Diagnostics and communication
- Predictive service & maintenance
- Connected to Enterprise backend/Car TCU
- Easy to locate features
- Saves time

My Mazda App

Mobile app for Mazda



Problem:

Mazda would like to develop mobile app for their end customers. The mobile app was required to be developed to support various models.



Solution:

The team developed iOS and Android applications for Mazda customers – includes Vehicle How-to Videos, Coupons, Recalls, Service History, Find My Car, Maintenance Schedule.

Application's goal is to keep Mazda customers engaged.

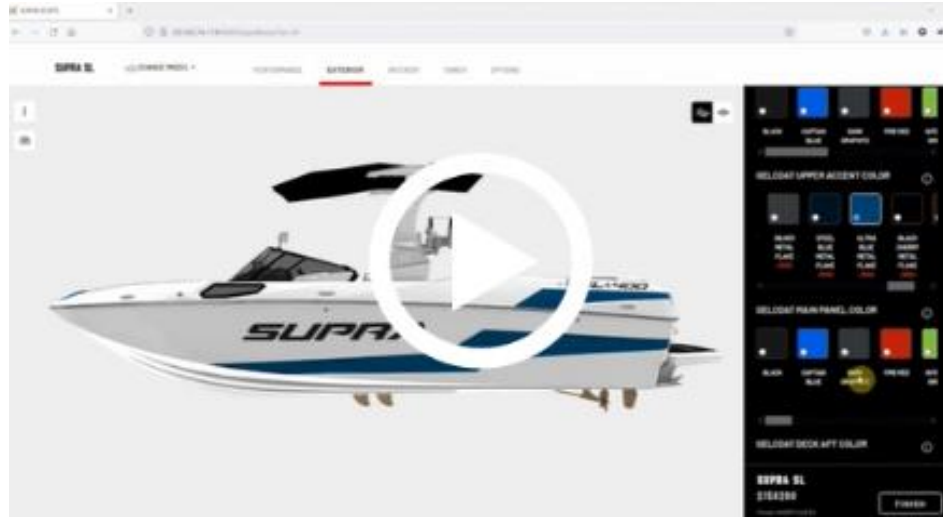


Benefits:

- Enhanced customer experience
- Improved customer satisfaction
- Easy to locate features
- Saves time and cost

Connected Boats: Convenience

Configure and order your Boat in AR



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>

Configure your Car in AR



Problem:

Customers are not visiting the dealerships due to Covid-19. Automotive companies want to provide customers with an AR app that allows them to configure their car and provide a contactless experience.



Solution:

Audax Labs developed an App with photo realistic 3D models along with AR capabilities for users on iOS and Android. The solution can also be made available on Microsoft devices (HoloLens and Surface Duo)

Users can configure the interior & exterior of the car. To make the experience engaging, gamification was included to enable users to drive the car in AR and let them see the configured car in real world.



Benefits:

- Enhanced customer experience
- Reduce inventory cost
- Fast and effective transactions
- Can minimize staffing cost
- Saves time

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



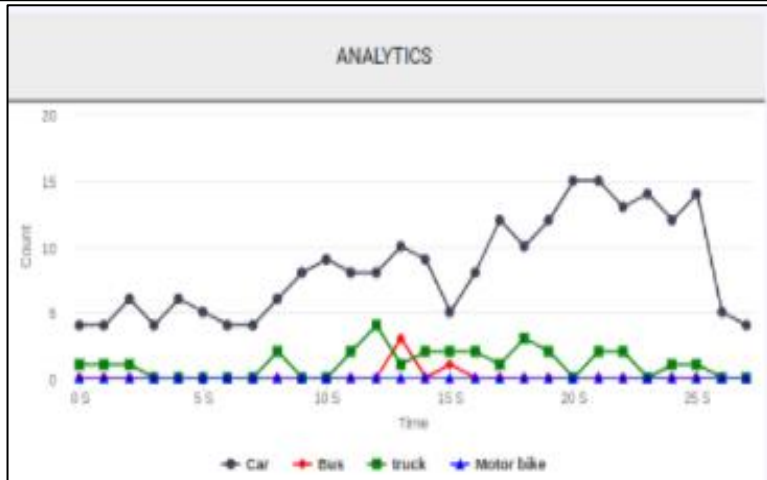
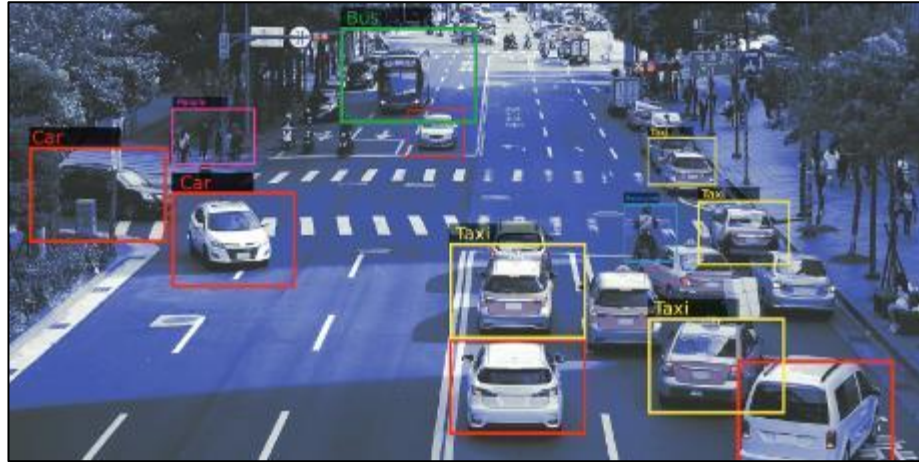
Benefits:

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>

AI based solution for Traffic Monitoring



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.

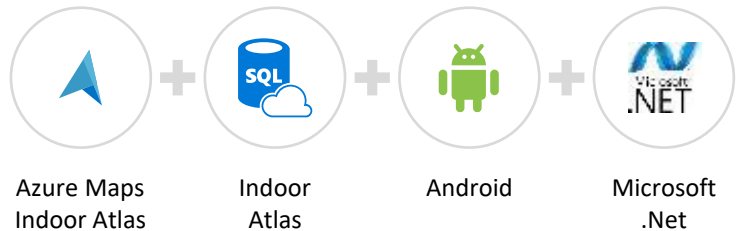
The solution provided a dashboard to show traffic data in graphical view for analytical purposes.



Benefits:

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

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

Technology Integration

IoT Integration	Microsoft IoT Hub	IoT Central	Azure Sphere
AI/ML Integration Sentiment analysis, Prediction, NLP, Image and object recognition	Azure ML	Azure Cognitive services	MLOps
Multi-Cloud integration	Microsoft Azure	AWS	Google Cloud
Payment gateway integration	PayPal	Stripe	Apple Pay/ Amazon Pay
API	API gateway	API gateway Transformation	Enterprise apps
Application Integration	SharePoint/ Salesforce	SAP/Service Now	Oracle/ Splunk/ D365

Integrate Any MS Solution with Any Enterprise App



Microsoft SQL Server Integration Services



SAP Integration



PeopleSoft Integration



IBM Mainframe Integration



Salesforce Integration



Content Intelligence /Platform

Outcome Driven Innovation!



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