Audax Labs
Incident Prediction and Resolution

Our Capabilities & Experience

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

PARTNERS

HITACHI Inspire the Next

Microsoft Solutions Partner

talend Partners

Google Cloud Partner

CUSTOMERS

HITACHI Inspire the Next

Microsoft

Parker

KARMA

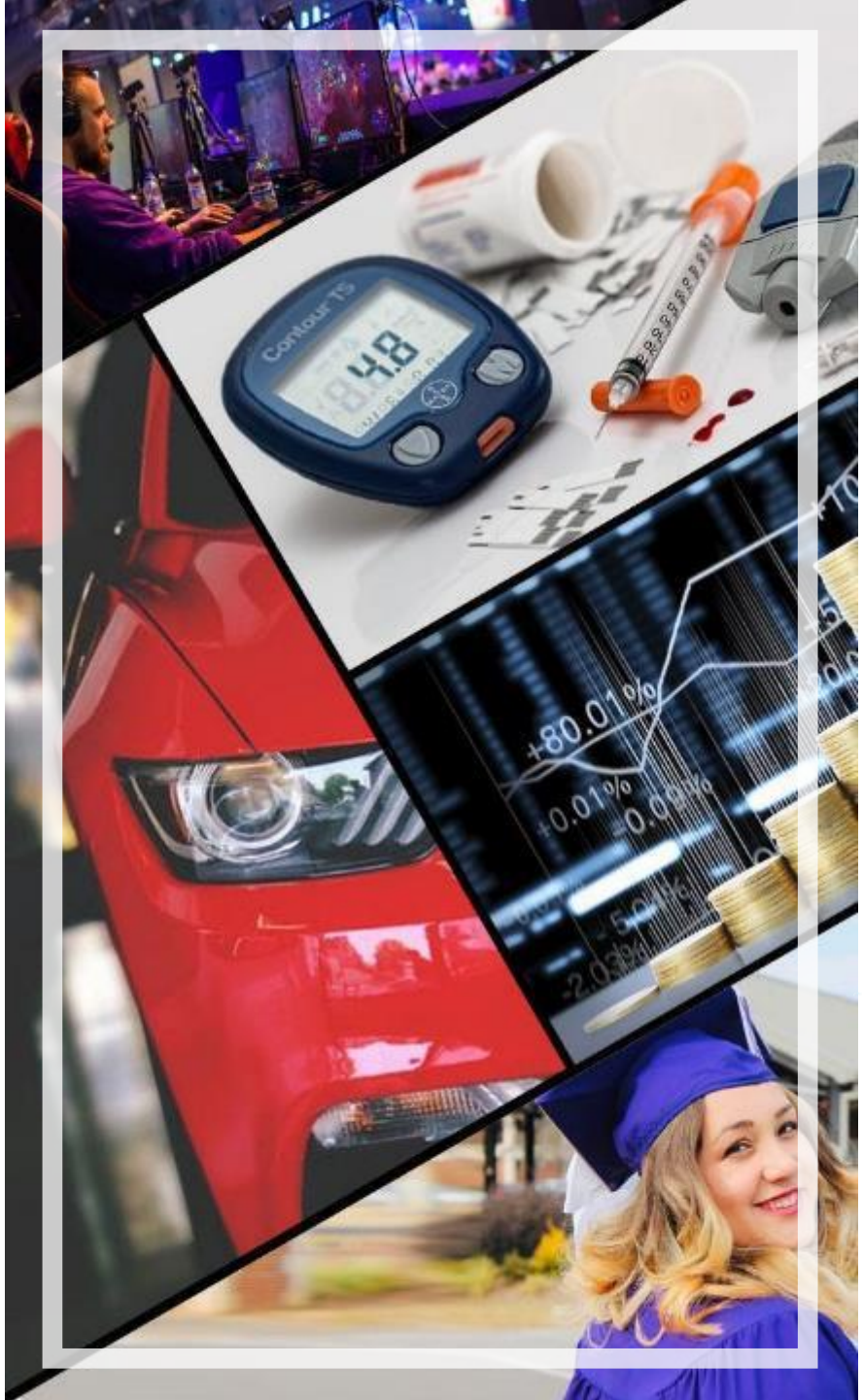
EV Bike Manufacturer

Rabobank

9to5 seating

Kelvin

Bonsai mediagroup



AUDAX LABS

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

AUDAX LABS

Making Enterprise Smarter Leveraging Outcome Driven Innovation!

AI
Artificial Intelligence

AR
Augmented Reality

IoT
Internet of Things

Cloud
Data Storage And Computing

Big Data
Managing Data Lifecycle

Traditional Technologies

Understanding Incident Prediction and Resolution

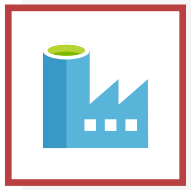
AUDAX LABS

Incident Prediction and Resolution involves using machine learning algorithms to analyze historical data and predict the likelihood, severity, and impact of future incidents.

Importance:

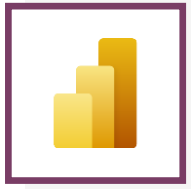
- Allows organizations to proactively identify and mitigate potential risks, minimizing disruption and enhancing operational efficiency.

Azure Machine Learning
for building, training, and deploying machine learning models.



Azure Data Factory
for data integration and orchestration.

Azure Databricks
for big data analytics and processing.



Power BI
for visualization and reporting.

Microsoft Power Automate
Automates workflows and integrates with various applications and services .

Microsoft Cognitive Services
Provides a set of AI-powered APIs and SDKs for integrating machine learning capabilities into applications.

Benefits of Incident Prediction and Resolution

Improved Risk Management

Enables organizations to anticipate and prepare for potential incidents, reducing their impact on operations.

Enhanced Operational Efficiency

Minimizes downtime by allowing proactive maintenance and resource allocation based on predicted incidents.

Cost Savings

Reduces costs associated with unplanned downtime, emergency repairs, and resource wastage.

Data-Driven Decision Making

Empowers organizations to make informed decisions based on insights derived from predictive analytics.

Industries Where Incident Prediction and Resolution Can Be Applied

Power Utilities

- Predicting power outages, optimizing maintenance schedules, and improving grid reliability.

Manufacturing

- Forecasting equipment failures, minimizing production downtime, and optimizing supply chain operations.

Healthcare

- Predicting patient admission rates, optimizing resource allocation, and improving healthcare delivery.

Transportation

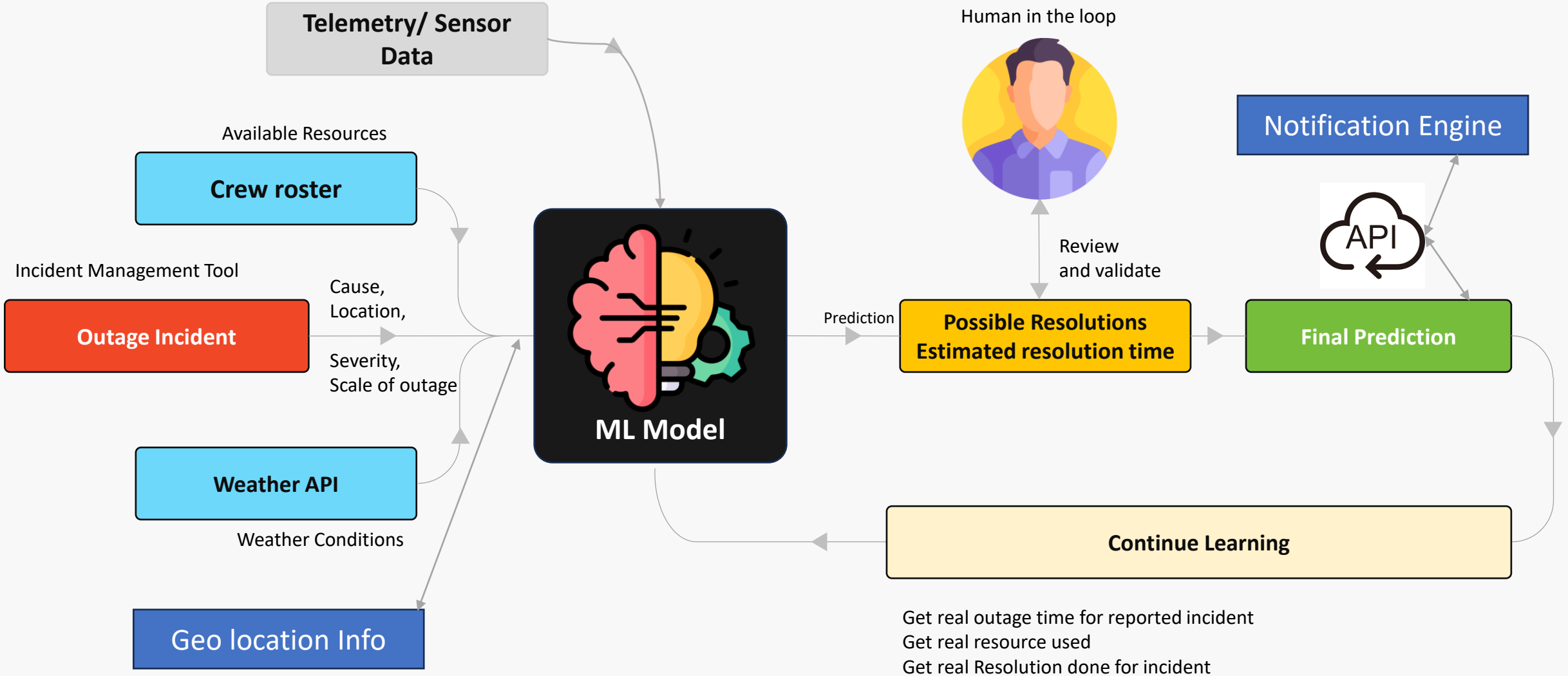
- Forecasting traffic congestion, predicting vehicle breakdowns, and optimizing route planning.

Financial Services

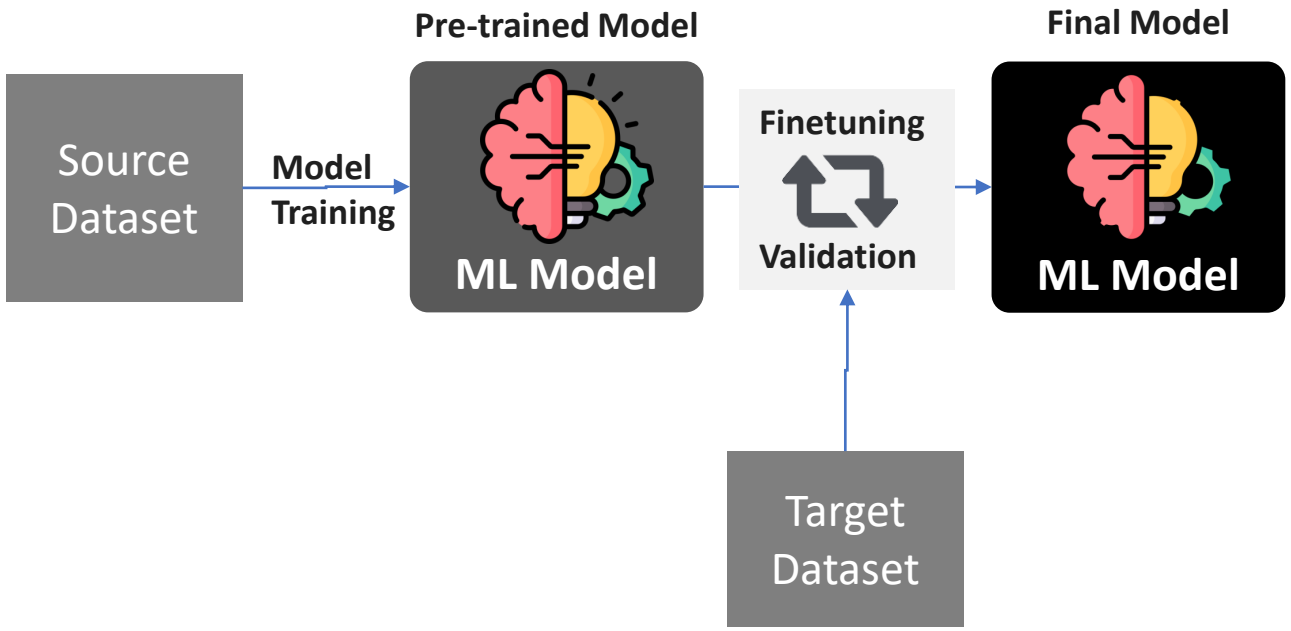
- Predicting fraud incidents, minimizing financial losses, and enhancing cybersecurity measures.

How it works

AUDAX LABS



Model Fine Tuning



Historical Dataset Required:

Sr. No.	Column
1	Incident Date
2	Incident Time
3	Short Description/ Incident Type
4	Long Description
5	Incident Cause
6	Incident Severity
7	Incident Scale
8	Incident Location
9	Incident Duration
10	Resolution
11	Resolution Time
12	Crew/team size

Audax Labs' Power Outage Prediction Model

Audax Labs' Power Outage Prediction Model is an innovative ML solution designed to revolutionize outage management for power utility companies.

CHALLENGES:

Power outages disrupt customer lives. Current methods for restoration time prediction are inaccurate and unreliable. Customer experience is impacted due to:

- Lack of real-time communication
- Unpredictable outage resolution times

FEATURES:

Real-time Outage Resolution Predictions: Generates real-time predictions, allowing utilities to anticipate outage resolution times down to the hour or even minutes.

Customer Call Volume Reduction: Empowers utilities to proactively communicate with customers, setting realistic expectations and minimizing customer frustration and call center costs.

Improved Resource Allocation: Optimizes crew dispatch and resource allocation based on predicted resolution times, enhancing efficiency and reducing costs.

Enhanced Crew Performance: Provides data-driven insights for crews to identify areas for improvement, resulting in faster resolutions and increased productivity.

Proactive Outage Management: Predicts potential outages by analyzing historical data and weather forecasts, enabling utilities to take proactive measures and minimize downtime.

ADVANTAGES:

Pre-Trained Model:
Utilizes a pre-trained ML model for outage prediction, reducing time and resources needed for training.

Real-Time Data Integration:
Seamlessly integrates real-time data from diverse sources, including outage reports, weather conditions, and accurate forecasts.

Continuous Learning:
Adapts and improves predictions over time through continuous learning from real-world data and crew performance feedback.

BENEFITS:

Enhanced Customer Satisfaction:
Fewer surprises and frustrations for customers with more accurate predictions, leading to higher satisfaction levels.

Improved Crew Accountability:
Better tracking of crew performance leads to enhanced accountability and more effective resource allocation.

IoT-Based Predictive Maintenance for HVAC Systems

Solution Component:

Azure Cloud + IoT Sensors + SQL

Problem Statement :

- Organizations seek an efficient solution to monitor, predict, and prevent problems for their HVAC systems before they occur.
- They aim for a mechanism for preventative maintenance and servicing to reduce costs and enhance service quality for the HVAC systems they maintain.

Solution:

- Audax Labs delivers an IoT-based platform connecting different HVAC systems to a cloud-based interface.
- The platform includes features like real-time monitoring, setup utility, and data transmission between HVAC systems and Azure Cloud to facilitate preventative maintenance.

Outcome (ROI):

- Maintenance cost reduction
- Better service quality
- Improved customer satisfaction
- Remote operation capability
- Better turnaround

Predictive Maintenance for Heavy Engineering

Challenge:

In 2017, HITACHI wanted to provide its customers and technicians a pathbreaking and rich user experience by creating a connected AR app. This new app greatly improves support technician's ability to diagnose and resolve issues.

Solution:

Audax Labs created an IoT-based solution that allows users to identify issues, provide augmented reports, and interact with the Cloud IoT Platform to generate and display AR overlay reports.

Outcome (ROI):

- Increase productivity
- Predictive maintenance
- Saves time
- Automation and control

Solution Component:

Azure Cloud + Lumada Edge Intelligence + Augmented Reality

AUDAX LABS

Outcome Driven Innovation!

www.audaxlabs.com

contact@audaxlabs.com