RANDOMTREES
ENTERPRISE AI SOLUTIONS

www.randomtrees.com

# AURA™ Augmented Reality for Smart Maintenance

Augmented reality is one of the building blocks for Industry 4.0 and a key enabler of the 'digital twin' concept. AR helps in delivering the digital twin by creating virtual models of a product, process or service. Artificial Intelligence when combined with AR presents a powerful combination of technologies to unleash worker productivity, improve safety and infinite possibilities

The pairing of the virtual and physical worlds in the digital factory allows analysis of data and monitoring of systems to head off problems before they even occur, prevent downtime, develop new opportunities and even plan for the future by using simulations. Whilst AR provides a digitally immersive experience to visualize beyond the surface, AI augments AR by detecting anomalies and predicting outcomes that require quick attention

## Solution Overview

AURA™ Augmented reality for smart maintenance equips maintenance technicians with an AR digital twin to assist with immersive diagnostics of any equipment that needs maintenance activities. AURA AR comes with digitally overlaid work instructions eliminating the need for carrying bulky maintenance manuals. The AI in the app helps detects various anomalies from thermal images and other surface level images quickly highlighting problem areas. AURA AR is integrated with ERP systems and allows the technician to update maintenance orders directly from the digital twin

## Business Value

- Improved Worker Productivity
- Reduction in Maintenance Costs
- Increased Asset Uptime and Availability

## Features

Big Data ML Platform for Automated data acquisition from IoT sensors and Cameras

Integrated Machine Learning models for Condition based Predictive monitoring

Real-time Visualization of IoT data and Thermal Imaging

Advanced Computer Vision Models for remote AR inspections using Digital twin

ERP Integration to track maintenance schedules and updating Inspection results

Improves Safety by providing AI enhanced, in-context Visuals and Recommendations

## Technologies in use

arkit™ TensorFlow unity iOS OpenCV