Alca Automation

AUTOMATING AUSTRALIA

ALCA AUTOMATION
ENGINEERING OUR FUTURE

Carving the future of AI and Robotics

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Our Products

Alca-Bot

Alca-Bot is an intelligent autonomous field robot engineered for demanding industrial and outdoor operations. It combines a highly durable body with smart mobility, allowing it to move across complex environments while continuously sensing, analyzing, and adapting to changing conditions.

- Outdoor IP67 rated Industrial Build
- Long battery life + Autonomous charging
- 6-axis industrial Cobot arm on top of AMR
- AI-Powered Modular AMR with a payload upto 1500 Kgs
- Multiple robots run in coordination through our Fleet management software
- Modular gripper which can serve from applications like pick and place, clean and wipe etc.
- Plug and play integration
- Advance Sensor suite for inspection

Gravity AI

Gravity AI Video Analytics is a next-generation intelligence platform that transforms raw video streams into actionable insights in real time. Built to operate seamlessly on both edge devices and the cloud, it processes multiple video feeds and AI models simultaneously.

- Real time AI analytics at the edge/cloud
- Multi model and multi camera processing
- High accuracy Deep learning models
- Behavior and event detection
- Advanced vehicle intelligence
- Facial analysis and Recognition suite
- 3rd party integrations
- Event actuation layer for triggering events to control rooms and stakeholders

Our Solutions

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Alca-Bot

Safety, Security & Emergency Response

- *Autonomous surveillance of yards and restricted zones*
- Intrusion detection and Perimeter Surveillance
- *Detection of hazards (fire, gas, environmental anomalies)*
- *Carrying emergency kits to remote track areas*

Infrastructure Inspection

- *Structural & Environmental monitoring*
- *Mapping and monitoring of cracks, leaks and anomalies*
- *Preventive maintenance of Infrastructure and real-time reporting*
- *Tunnel & facility inspection using AMR/CMR*

Rail Yard Operations

- *Precision cleaning around train exteriors and interiors*
- *Material movement inside depots & workshops*
- AI powered Robotic assistant for the Maintainer
- Rolling Stock Maintenance

Gravity AI

Safety & Security

- *Trespass and Intrusion detection*
- *Loitering detection*
- *Abandoned Object detection in Platform*
- *Suspicions/violent incident detection*
- *Graffiti Vandalism detection*
- *Distress Detection*

Operations & Maintenance

- *Automated Rail Track Inspection*
- *Level crossing violation detection*
- *Vision for autonomous trains*
- *Track bed and structural checks inside depots*

Passenger Analytics

- *Enhancing Disability Services*
- *People Distance from Track Estimation*
- *Passenger density & Crowd flow monitoring*
- *Passenger Dwell Time detection*
- *Fall detection*

Our Solutions are certified with ISO 9001, 27001 and 42001

At Alca Automation, our passion for delivering reliable, innovative AI and Robotics systems and solutions reflects our commitment to shaping the future of intelligent automation.
Our Delivery is matched only by our dedication to our clients.

We believe in building lasting partnerships through transparency, technical excellence, and a commitment to outcomes that truly make a difference. As we move forward, we remain focused on providing solutions that not only meet expectations - but exceed them.

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