ASTRA

Group Of Companies

miBot

MiBot is the robotics and AI innovation arm of the Astra Group — a global enterprise with 35 years of legacy across 15 international markets and powered by over 2,180 professionals. Backed by this deep-rooted expertise, MiBot Ventures pioneers intelligent robotic solutions for surveillance, safety, and smart assistance across sectors.

Our Group Companies

2180 STRONG ENGINEERING & PROJECT MANAGEMENT

TEAM

1250+ CUSTOMERS **42** PATENTS

WORLD WIDE OFFICES & AFFILIATED NETWORKS

ASTRA
Group Of Companies

mi3ot

Oslo
Hamburg
Paris
Bratislava
Graz
Lisbon
Houston
Geoje
Busan
Nagoya
Dubai
Delhi
Pune
Mumbai
Banglore
Mysore
Kuala Lumpur
Kochi
Chennai
Rio De Janeiro
Johannesburg

Offices

Affiliate Network

Core Team

miBot

Vivek Dilip
Director & CEO

- B-Tech Electronics & Communications - Anna University
- Entrepreneurship OPM from Harvard Business School
- Started this venture after spearheading a merger with Houston O&G based company
- Grew the group's combined revenues to more than USD 100mn
- Scaled the group team size to 1850+ personnel
- Project Board representative of several major O&G projects including a USD 450 mn project

Kalaikovan Antony
Director & CTO

- Bachelors and Masters degree in Computer Science - Madras University
- Lead Serba Dinamik, a listed Malaysian company, as CTO, from USD 10mn to USD 3bn
- Instrumental in developing various products in the Oil & Gas, IT and educational sectors
- Has led teams for development of new-age technologies like blockchain, AR/VR, IIOT, eWallet, LMS, e-Com portals.

Yogesh Dubey,
Director

- Brain behind Implantaire Technologies
- Director and shareholder of LAHARI (India's largest compliance testing facility)
- Created 80+ product patents for customers across the globe - Fingerprint on a phone concept - growing saffron & cotton for the first time in Hydroponics along with Arizona University and Food Future Group, crowd control specialized gun for UK police are some marquee projects

Archana Iyengar,
CMO

- B.Com – University of Madras
- Master's in Accounting & Finance – Pondicherry University
- Founded Shrythi Technology Studio after leading global roles across tech, healthcare & design
- Scaled the firm with consistent double-digit revenue growth
- Drove $7M+ healthcare rollout in partnership with Baylor College of Medicine
- Influenced national health policy through strategic engagement with NITI Aayog & state leaders

Laxman Nasarpuri,
Advisor

- MBA - Indira Gandhi National Open University-New Delhi
- ICWA Cost and Management Accounting Kolkata
- M.Com, LLB
- Managing Partner Money Power Consultants LLP
- Co-Founder & CFO Scitechesy Research & Technology
- Co-Founder & Director-SteelDalal
- Co-Founder & Director -GlobeInvest Ventures UK
- IICA Certified Independent Director

Core Team

mBot
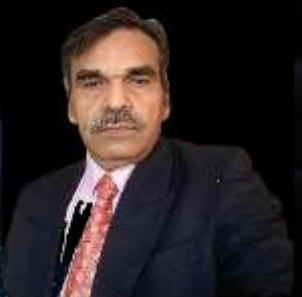
Dilip Radhakrishnan, Group Chairman

- B-Tech in Electrical Engineering and MBA on Business Strategies
- Started the group in 1990
- Chairman of the Group Companies with 40+ years of experience
- Group's presence has been in over 15 global locations
- Has been successful in creating niche business verticals : brining FPSO engineering business to India, adoption of CAD for Government PSUs in India in early 90's
- Has played critical role in mega Oil & Gas projects being the M. D of the engineering company

Yannick Kim, Advisor

- Engineering in Mechnical
- Brings in 40+ years of experience in the Oil & Gas industry in executing projects in Africa and South East Asia
- Ex-Project Director of TOTAL Energy
- Since 2017, has been an advisor for Offshore divisions of Hyundai Heavy Industries and Samsung Heavy Industries
- Advisor to Oiltech for Engineering for making fast track execution strategies along with Shipyards

Venkatasubramanium, Advisor

- B-Tech and M-Tech from Madras Institute of Technology with 50 years of experience
- Ex-President of Eurotherm
- Founding Director of Oiltech Engineering
- In the capacity as Oiltech Engineering Director, executed 12 major FPSO projects for different geographies positioning it as a global Leader for complex Offshore O&G projects
- Came out with modular E-House concepts for ABB and Siemens for Offshore Projects

Arvind Balagopalan, Advisor
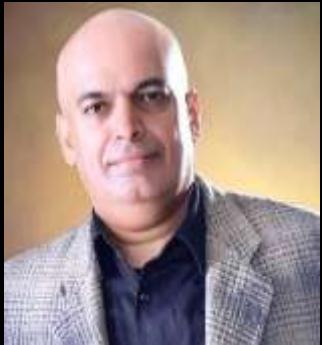
- B.E Mech Engg - BITS Pilani
- MBA - IIM Lucknow
- 27+ years of experience in E-commerce and FMCG with companies like Amazon, eBay, Nokia, Samsung and HP
- As a co-founder and business head, scaled an eCommerce startup to 1800 Cr.
- Held critical customer facing and strategic roles in both B2B and B2C enterprises

Luiz Faria, Advisor

- Engineering in Mechanical Discipline
- Ex- Project Manager of Petrobras monitoring several offshore projects
- Successful as the PMC head for the first major O&G Offshore Floating project in Middle East
- Proven track-record in turn around of Oschatz, Germany and successfully handing over the business operations
- Brings in 45+ years of experience in Oil & Gas in South and North American geographies
- Advisor to Oiltech for Engineering and PMT projects, acts as a client interface

Core Team

Arun Marar
Advisor – AI/ML/DL

- Bachelors from Indian Institute of Technology, Chennai
- Ph.D. in Operations Research and Financial Engineering from Princeton University
- Expert at building AI/ML solutions across multiple domains such as healthcare, retail, transportation logistics, banking and financial services, supply chain management, and marketing and sales
- Proven capability in helping enterprises move up the value chain of analytics, from predictive to prescriptive using optimization and simulation

Raghu Damodaran
Advisor

- Chartered Engineer with 35+ years of experience-
- BS in Metallurgical Engineering & MS in Corrosion Engineering from IIT Madras
- Former Global General Manager at Shell- 20+ peer-reviewed publications & 5 patents in energy sector-
- Founder of Kaleidoscope Energy & Engineering Advisor at GATE Energy

Shanid A.P,
Embedded Expert

- 20+ years in product development, IoT, and embedded systems
- Engineering Technology degree from BITS Pilani
- Leads end-to-end solution design, development, and manufacturing
- Delivered projects for global clients (India, UAE, USA, Europe)- Combines technical innovation with business insight
- Focuses on sustainable, user-centric solutions and impactful tech products

Gopi Naga Bharat
Embedded & UI Expert

- B.Tech in Engineering Technology & M.Tech in Embedded Systems from BITS Pilani
- Project Manager with end-to-end product design & development expertise
- Experienced in embedded systems, mobile apps, and IoT solutions
- Skilled in cross-functional team coordination (hardware, software, cloud)
- Proven track record of delivering complex projects on time and within scope

Santhosh.R
AI & Image Processing Expert

- Experienced in robotics, embedded systems, AI, and computer vision
- BE in Mechanical Engineering; Gold medalist in M.Tech Robotics from SRM University
- Manages industrial projects at MiBot from start to finish
- Develops AI-driven automation and image processing solutions
- Delivers intelligent, high-precision systems for industrial applications

STRATEGIC PARTNERSHIPS

miBot

ZENTECH OILTECH

- GROUP COMPANY WITH 42 PATENTS WITH HQ IN HOUSTON
- PRIMARILY FOCUSSED IN THE OIL & GAS SECTOR
- OFFICES IN 7 COUNTRIES

KALEIDOSCOPE ENERGY

- HEADED BY FORMER R&D HEAD OF SHELL, HOUSTON
- HQ IN HOUSTON
- EXPERIENCE IN PMC PROJECTS ESPECIALLY IN GREEN ENERGY

VOLLWERT ELECTRIC

- 5% INVESTOR IN MiBOT
- LEADING COMPANY IN AUTOMATION & INSTRUMENTATION HAVING EXECUTED 200+ MAJOR PROJECTS
- HQ IN NETHERLANDS

IMPLANTAIRE TECHNOLOGIES

- GROUP COMPANY BASED IN MYSORE
- DEVELOPED 85+ PROTOTYPES & PATENTS FOR CUSTOMERS ACROSS EU & USA
- PART OF INDIA'S LARGEST ESDM CLUSTER

CENTA

- LARGEST TEACHER PLATFORM WITH 1.7 MILLION TEACHERS
- 7,000+ LOCATIONS & 1,00,000+ SCHOOLS

POLAR PARTNERS

- AWARD WINNING FINNISH EDUCATIONAL NETWORK
- 47 FINNISH CONSORTIUM PARTNERS

SENTI SYSTEMS

- NORWEGIAN COMPANY FOCUSSED ON GNSS DENIED NAVIGATION AND POSITIONING

With **Expertise in**

Artificial Intelligence & Computer Vision

Image Processing & Real-time Data Analytics

Autonomous Robotics & System Integration

Edge AI & Computation

LiDAR-Based mapping

Path planning for robot navigation

What We Offer:

mBot

Safety Inspections
Real-time hazard detection
and
PPE compliance

Material Management
Autonomous transport
and
inventory monitoring
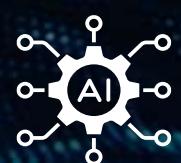
Surveillance & Monitoring
24/7 autonomous patrolling
and
live streaming

Predictive Maintenance
Detect signs of equipment wear
and tear early through AI-based
anomaly detection

Edge AI Integration
On-device inference for real-time
decision-making with no
dependency on cloud latency

Safety detection

Empowered by advanced AI and computer vision, our intelligent inspection robots transform industrial operations by detecting hazards, enforcing PPE compliance, and upholding HSEQ standards with precision. They identify over **42 safety anomalies**, ensuring a safer and more compliant workspace with: **26 anomalies already implemented** and **10 currently in progress**.

Designed with modular architecture and autonomous navigation, our robots evolve with your needs, delivering **automation that's intelligent, adaptive, and built for the future**.

Anomalies : Completed

1. Pathways must be free of material (boxes, pallets).	14. Gas cylinders stored outside the cages without securing with chains.
2. All materials will be placed within yellow line marks.	15. Material kept on broken/damaged pallets.
3. Any ladder in the walkway without personnel must be reported.	16. Blocking access to fire extinguishers.
4. Forklift operation in the walkway without barricading should be reported.	17. Scaffolding erected without tags.
5. Personnel without proper PPE should be reported.	18. Lifting operations carried out without barricading the area.
6. Climbing ladders without proper PPE (Safety Harness).	19. Manual handling without gloves.
7. Forklift operation should be assisted by a banksman.	20. Riding on hand pallet trucks.
8. Multi-layer stacking on racks should not be allowed.	21. Standing on forklift blades.
9. Lights under maintenance or poor visibility in the warehouse.	22. Manual handling of materials on ladder.
10. Drums should be kept on spill pallets.	23. Detect possession or usage of local weapons (e.g., Aruva knives).
11. Personnel walking on forklift driveways.	24. Detect and monitor individuals from a predefined suspect list.
12. Materials blocking emergency exits.	25. Detect people throwing trash or littering in public areas.
13. Gas cylinders laid down horizontally.	26. Detect possession or consumption of liquor in restricted/public areas.

27. Detect missing or damaged barricades at edges of buildings, platforms, or near excavations.	35. Detect person standing, leaning, or sitting on the edge at height.
28. Detect workers entering restricted zones around moving cranes, forklifts, or excavators.	36. Detect unsafe use of scaffolding, ladders, or platforms (e.g., missing handrails, partially boarded platforms).
29. Detect reverse movement of vehicles without a banksman.	37. Detect people entering restricted geo-fenced zones near water bodies.
30. Detect workers standing under suspended loads in the lifting area.	38. Detect crowd size and control (trigger loudspeaker alerts when limits exceed).
31. Detect mobile phone usage while operating machinery, vehicles, or equipment.	39. Detect incidents of eve teasing or harassment in public spaces.
32. Detect vehicles moving in the opposite direction in a one-way zone.	40. Detect individuals smoking in restricted or no-smoking zones.
33. Detect workers not using safety harnesses at height.	41. Detect incidents of people falling (accidental or medical emergency).
34. Detect workers not anchoring the lanyard of safety harnesses at height.	42. Detect unattended or suspicious baggage left in public.

Anomalies : Snapshots

Ladder alone in walkway

Person near the ladder

Drums on wooden pallets

Drums on spill pallets

Handling material without gloves

Handling material with gloves

Blocking access to fire extinguishers

Free access to fire extinguishers
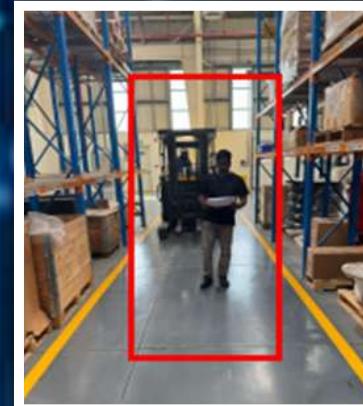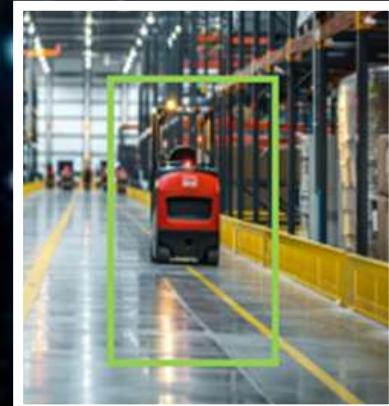
Blocking access to emergency exit

Free access to emergency exit

Person on forklift driveway

Clear Forklift driveway

Forklift operation without barricade

Forklift operation with barricade

Materials outside yellow line

Materials within yellow line

Our Robots

Qairo

MX

Qairo

Specification	Details
Model	Qairo
Type	AI-powered inspection module
Camera	Depth camera for 3D awareness
Processor	Jetson Orin
Power Supply	Automatic charging support
Use Cases	Safety checks, surveillance, industrial automation
AI Capabilities	Customizable models for various scenarios
Monitoring	Continuous operation without manual intervention
Operational Environments	Factories, warehouses, critical sites
Benefits	Reduces workload, increases accuracy, enhances safety

Qairo modules

Disinfection module

Inspection module

Delivery module

Key Applications

Warehouse Automation
Real-time inventory tracking and structural integrity monitoring in large storage facilities with 99.8% accuracy.

Healthcare Monitoring
Sterile environment verification and patient safety compliance in medical facilities with continuous 24/7 monitoring.

Industrial Inspection
Predictive maintenance and hazardous area monitoring in manufacturing plants with AI-driven anomaly detection.

Retail Analytics
Shelf inventory analysis and customer movement tracking with heatmap generation and dwell time metrics.

Smart Cities
Infrastructure monitoring and public space management with automated incident reporting.

Laboratory
Equipment calibration verification and sample tracking with blockchain-recorded audit trails.

Use cases

1. NOC Warehouse, Qatar: AI-powered system deployed for automated safety compliance, detecting 22 anomalies and sending real-time alerts

2. Private Hospital, Qatar: Autonomous robot automates lab sample delivery, uses elevators, can serves water to patient , and enhances staff efficiency with safe navigation.

MX

Component	Purpose	Specification / Details
MX Chassis	Surveillance mobility base	All-terrain platform, modular drive
Turning Radius	Maneuverability	Zero turning radius (on-the-spot turning)
Drive Configuration	Terrain handling	4WD (Four-Wheel Drive)
Payload Capacity	Equipment and sensor load	Supports up to 500 kg
Towing Capacity	Utility and transport support	Can tow up to 2000 kg
LiDAR	Area scanning and navigation	Obstacle detection, patrol planning
Camera Mount	Camera support	Swappable mount (PTZ, 360°, Thermal)
360° Camera	Full-area coverage	Fisheye or multi-lens 360° camera
Surveillance Cameras	Perimeter monitoring	High-resolution cameras for real-time surveillance
IP-rated Enclosure	Weather/dust protection	IP-rated (as per industry standard)
Speakers + Microphone	Two-way communication	Noise-cancelled mic, loudspeaker
Edge AI Processor	Vision processing	AI computing for real-time video and sensor analysis
360° Perception System	Total situational awareness	Multi-sensor fusion (LiDAR + Camera + Proximity)
Thermal + LiDAR Combo	Enhanced detection	Fused thermal and spatial awareness

Key Applications

Crowd Management
- Real-time density analytics
- Emergency flow optimization
- Anomaly detection

Traffic Enforcement
- Automatic violation recording
- License plate recognition
- Intersection monitoring

Beach Monitoring
- Drowning prevention
- Perimeter security
- Night patrols

Parking Control
- Space occupancy detection
- Handicap zone enforcement
- Automatic ticketing

Theft Prevention
- Behavior analysis
- Asset tracking
- Real-time alerts

Event Security
- Weapon detection
- Access control
- Emergency coordination

Use case

1. Agriculture & Farming, India: All-terrain robot for spraying, harvesting, and crop monitoring, reducing manual labor and improving efficiency.

2. EPC Companies – L&T: Deployed at construction sites for HSEQ operations detecting 33 anomalies, recording safety violations and enhancing workplace safety with all-terrain mobility.

3. Pondicherry government: AI-powered beach surveillance robot that detects weapons, suspects, littering, restricted zone entry, crowding, liquor or smoking violations, harassment, falls, and unattended baggage along the beach.

Thank You

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