Company Profile

Design And Technology Centre-
MSR Capital, Office No-7, Third Floor, Morwadi, Pimpri, Pune-411018;
LL: +91 20 65311457

Factory-
Gat No-53/1, Nigadi Chakan Road, Nr Talwade Circle, Talwade.
Pune-411062; LL: +91 20 65101457

Email- info@geometrixar.com; Mob: +91 9921001880; Web- www.geometrixar.com;
Who We Are?

Geometrix is an engineering company, incorporated in Year 2010

*Our VISION is to become, “FIRST CHOICE” of Automobile Industry, Aerospace Industry, Steel Industry, Food Industry, Home Appliances Industry, Consumer Goods Industry, Engineering Industries and Farm Equipments for acquiring automation & robotic solutions and services. We also provide the used and refurbished robots to various industrial applications.*
Who We Are?

Qualification:
DEE-Diploma In Electrical Engineering
BE-Bachelor of Electrical Engineering

Professional Working Experience:

- **Satyam Computers Ltd, Bangalore**
  Worked as a Team Leader in Digital Manufacturing. Worked on various manufacturing conceptualization and simulation projects for Nissan and Bombardier.

- **General Motors Design and Technology Centre, Bangalore**
  Worked as an Engineer in Virtual Manufacturing: Worked in Simulation in BIW Manufacturing Engineering of GMTCI and delivered onsite and offsite projects for GM Hummer, Cadillac, GMC, GM-Daewoo. Worked onsite USA, South Korea for Body Validation and Simulation projects.

- **Tata Motors Ltd**
  Worked in Manufacturing Engineering of Tata Motors Ltd and was involved in Project planning and delivery of manufacturing lines for BIW. Involved in Technical and productivity services required for manufacturing of BIW.

Director Profile
Fiat India Automobiles Ltd, Mumbai (Formerly Known as Fiat India Ltd) worked in Paint Shop maintenance as an Executive Maintenance. Handled troubleshooting of ABB’s painting Reciprocators, Paint Automisers, paint mixing room, Utilities, ED, Conveyors and utilities. Also worked in robotic axle welding shop maintenance activities, BIW Welding shop maintenance activities.

Bajaj Auto Ltd:
Worked as an Engineer in Maintenance of Gear manufacturing Facility for two wheelers and three wheelers. Maintenance of CNC machining centres, robotic pick and place systems and welding systems.

Other Certifications and Publications:
1) Robotic Advanced level trainings from Fanuc and ABB Robotics.
2) Paper selected and awarded at SAE International USA-Virtual Plant Commissioning Methodology using Digital Manufacturing And Lean Principles
3) Deutsche Management Academye Niedersachsen, Celle Germany-Course in Industry 4.0-Application of IT in the modern industry. IT in Production, IT in After Sales.

Total Experience:
19 Years in Industrial Automation and Robotic application engineering, Maintenance, Production, Design/Simulation, Project Management, Business Development.
Engineering is our passion.

We support world class BIW line builders for automobile, engineering and manufacturing companies, from “CONCEPT TO COMMISSIONING” phase, through following systematic approach.

a) **Consultation:**
   Group discussion, Strategy & RFQ preparation.

b) **Pre-SE:**
   Feasibility & Conceptualization.

c) **SE / ME (Product / Process / Facility):**
   Detailing & verification through simulation using digital manufacturing softwares.

d) **Designing:**
   Jig, Fixture, Conveyors, SPMs, Robotic cells, Press Tools, PLC controlled systems.

e) **Manufacturing:**
   Jig, Fixture, Conveyors, SPMs, Robotic cells, Press Tools & PLC controlled systems.

f) **Installation, Commissioning & Proving:**
   Green field & Brown field project execution.
**Resources**

### Design softwares
- Catia V5R19
- AutoCAD-2012
- SolidWorks
- Autodesk Fusion 360

### Simulation Softwares
- Technomatrix Robcad 9.1,
- Siemens Plant Simulation
- Siemens Process Simulate(WIP)
- Delmia V5

### PLC /Controls Expertise
- Allen Bradley
- Siemens
- Mitsubishi
- GE-Fanuc
- Beckhoff
- Messung
- Omron
- Delta etc
- Eplan
- Autocad Elect.

### Robotic Expertise
- Fanuc,
- ABB,
- Kuka,
- Motoman
- OTC
- Kawasaki,
- Nachi,
- Panasonic,
- Comau,
- Universal
Robotic system capabilities.

ONSITE ROBOT PROGRAMERS

Fanuc, ABB, KUKA, Kawasaki, Motoman, Nachi, Comau, OTC, Universal
- Robotic spot/Mig Welding
- Robotic Roller Hemming
- Robotic Sealent/gluing
- Robotic Stud Welding
- Robotic Laser Cutting
- Robotic Ultrasonic Welding etc. applications.

INTEGRATION
- Layout preparation
- Equipment selection;
- Fixture and peripheral equipment design
- Verification through simulations
- Manufacturing of tools/equipments
- Safety system design
- PLC system design/ control design
- Online robot programming, PLC programming
- Site implementation and prove out
We have expertise in use of PLC to read digital and analog inputs from various field devices, execute a user defined logic program, and write the resulting digital and analog output values to various output elements. Also we developed the system for interaction of the shop floor devices with the top floor for monitoring as well as controlling.

<table>
<thead>
<tr>
<th>Control Parameters</th>
<th>Networking &amp; communication</th>
<th>Operator Interfaces</th>
<th>Peripherals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical.</td>
<td>ControlNet</td>
<td>Graphic Terminals</td>
<td>Contactors &amp; relays</td>
</tr>
<tr>
<td>Instrumentation.</td>
<td>DeviceNet</td>
<td>Message Displays</td>
<td>Emergency stop devices</td>
</tr>
<tr>
<td>Flowmeter.</td>
<td>EtherNet/IP</td>
<td>HMI</td>
<td>2d/3D Vision systems</td>
</tr>
<tr>
<td>Temperature.</td>
<td>Ethercat</td>
<td>SCADA</td>
<td>Hazardous location</td>
</tr>
<tr>
<td>Pressure.</td>
<td>DH-485</td>
<td>iP’s</td>
<td>Pneumatic switches</td>
</tr>
<tr>
<td>Level.</td>
<td>Modbus</td>
<td></td>
<td>Isolation systems</td>
</tr>
<tr>
<td>Robotic parameters</td>
<td>Profibus</td>
<td></td>
<td>Interlock switches</td>
</tr>
<tr>
<td>Statistical data</td>
<td>Remote I/O</td>
<td></td>
<td>Load switches</td>
</tr>
<tr>
<td>job dimensions</td>
<td>DH Plus</td>
<td></td>
<td>Operator interfaces</td>
</tr>
<tr>
<td></td>
<td>Can Bus</td>
<td></td>
<td>Presence sensing devices</td>
</tr>
</tbody>
</table>

**Expertise**

**Allen Bradley** - Micrologix, SLC500, PLC5, Compact Logix, Control Logix, Flex Logix, SoftLogix, Drive Logix, Guard Logix, Smart Guard etc.

**Beckhoff** - Servo tools as well as smart controllers and iPC’s.

**Siemens** - S7-Simatic 200, 300, 400, **Mitsubishi, Messung, Delta** etc

**Fanuc** – Fanuc FAPT Ladder-III for robots
Technical Collaboration with REA JET INDUSTRIAL CODING AND MARKING SOLUTIONS, UK

H BEAM MARKING SOLUTION
SHEET/PLATE/PIPE/COIL MARKING SOLUTION IN STEEL INDUSTRY.
BILLET/BEAM/COIL (HR, CR) MARKING SOLUTION
INGOT MARKING SOLUTION
ROBOTIC MARKING AUTOMATION
GANTRY SYSTEMS
Project for US Based Fibre Glass Mfg Industry (Johns Manvile)
ROBOTIC MACHINE TENDING

Auto Multi Gauging System of turned jobs with Robotic Auto loading and unloading. For ID, OD, Step depth, Ovality, Counter etc. (WIP)
Projects delivered

Turnkey-Packaging Line Automation Consulting and delivery (system for 1200 Wooden furniture parts) for Godrej & Boyce, Interiao.

Turnkey-Robotic Ultrasonic welding

2-Axis-Turn Table-Sulzer India Ltd
Projects delivered

- Turnkey-Robotic flaming and sealing
- Handling and spot welding-ABB Robots For Leading FMCG group.
- Turnkey-Robotic Spot Welding System for car Rear Crash
- Conceptualization, simulation, design of Cupboard sheet Robotic bending line for leading FMCG group.
Projects delivered

Turnkey-Robotic Laser Cutting System-TACO For Mahindra Xylo Bumper

Turnkey-Robotic Systems and Integration Support-Mig Welding And Material Handling

Machine Tending

Cylinder Welding
Projects delivered

Kalyani Techno Forge - Robotic Pick & Place System For Forging Job -

Western Refrigeration - Robotic sheet metal bending with KUKA Robot.

ENDURANCE Die - Casting Machine - Robot – Trimming Press Integration (ABB Robot)

Varroc – Friction welding & Deflasher Machine Robotic Pick & Place system + SPM for auto job feeding
Projects delivered

Turnkey-Tractor Chassis part Robotic Welding-Fanuc/Motoman Robots for Windal
Projects delivered

Robotic Pick & Place System For Forging Industry - Consulting, concepts and delivery

Robotic Pick & Place System For hot Job (IBH output to Press Input) - Robotic Spraying and foam pouring concept and delivery
Projects delivered

Robotic Automation Consulting for Disc Spring manufacturing set up.

Clip Sensing POKA YOKE SYSTEM For Vehicle parts

Edge Coating Line For JM USA

Cooper Corporation Pvt.Ltd
Consulting for using PLM tools for optimizing the throughput, throughput analysis, production of mix model variants, contingency planning.

And Many More
ROBOTIC PICK AND PLACE/PACKING-FOOD INDUSTRY
### Projects-Simulation

- Process Includes Inputs for simulation, Process Development during simulation, Deliverable Data, Process Optimization, Gun Selection, Robot Selection, Cycle Time Optimization

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Process Development</th>
<th>Deliverable Data</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layout</td>
<td>Tool Validation</td>
<td>Weld vectors</td>
<td>Spot Welding</td>
</tr>
<tr>
<td>Tool Data</td>
<td>Gun Modification</td>
<td>Pack and go</td>
<td>Mig Welding</td>
</tr>
<tr>
<td>Fixture Data</td>
<td>Spot Distribution</td>
<td>Simulation document</td>
<td>Handling</td>
</tr>
<tr>
<td>Process Plan</td>
<td>Layout Modification</td>
<td>2D Layout</td>
<td>Gluing</td>
</tr>
<tr>
<td>Weld Vectors</td>
<td></td>
<td>Process Video</td>
<td>SSW</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marking</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hemming</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Arc welding</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stud welding</td>
</tr>
</tbody>
</table>

- Process Includes:
  - Inputs for simulation
  - Process Development during simulation
  - Deliverable Data
  - Process Optimization
  - Gun Selection
  - Robot Selection
  - Cycle Time Optimization
Projects delivered
Projects delivered
Projects delivered

REAR 115 _STATION

REAR_210 STATION

FRONT 50 _STATION

FRONT 40 _STATION
Projects delivered
Projects delivered
Projects delivered
Projects delivered

Validation Simulation of robotic spot welding workcell in Robcad for leading Automobile OEM through leading BIW line builder.
Projects delivered

Validation/Simulation of robotic spot welding workcell for Leading Automobile OEM through leading BIW Line Builder.

Validation/Simulation/OLP-For BIW Line Up gradations using Robcad for Leading Automobile OEM through leading line builder.
Validation Simulation of robotic spot welding workcell in Robcad for leading Automobile OEM through leading BIW line builder.
Projects delivered

Validation Simulation of robotic spot welding/sealing/stud welding/marking/PSW and handling workcell in Robcad for leading Automobile OEM in Europe through leading BIW Engineering organization.
Projects delivered

Leather Shoes-Robotic Roughing and Spraying for leading shoe exporter

Robotic Spot Welding with Fanuc robot for Leading automobile OEM

Robotic Roller Hemming for leading automobile OEM.

Robot Programming Services at VW-Shanghai, China through GAG, China
Projects delivered

- Robotic Spot Welding And Material Handling for Car Closures Line - Fanuc Robots - COMAU India For Maruti Suzuki
- Rear And Front Frame Welding Robot Programming - TVS - Wego
- Robotic Roller Hemming - ABB Robots - (For ABB India & Reno Nissan)
- Robotic Spot Welding - Nachi Robots for Wooshin Engineering Pvt. Ltd
Our Clients

And many more…
<table>
<thead>
<tr>
<th>BUSINESS PARTNERS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For Industrial Robotics</strong></td>
<td></td>
</tr>
<tr>
<td>Global Robots Limited, UK.</td>
<td></td>
</tr>
<tr>
<td>Beancroft Road, Marston Moretaine</td>
<td></td>
</tr>
<tr>
<td>Bedfordshire, MK43 0QF United Kingdom</td>
<td></td>
</tr>
<tr>
<td><strong>For Industrial Coading And Marking</strong></td>
<td></td>
</tr>
<tr>
<td>REA JET Ltd.</td>
<td></td>
</tr>
<tr>
<td>119C Olympic Avenue, Milton Park</td>
<td></td>
</tr>
<tr>
<td>Abingdon, Oxfordshire, OX14 4SA</td>
<td></td>
</tr>
<tr>
<td><strong>For High Speed Delta Robots</strong></td>
<td></td>
</tr>
<tr>
<td>Codian Robotics BV, Netherlands.</td>
<td></td>
</tr>
<tr>
<td>Wildeman 2</td>
<td></td>
</tr>
<tr>
<td>3905 TL Veenendaal荷兰</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
</tr>
<tr>
<td><strong>For Vision Systems</strong></td>
<td></td>
</tr>
<tr>
<td>BLUEWRIST INC.</td>
<td></td>
</tr>
<tr>
<td>431 Alden Road #19</td>
<td></td>
</tr>
<tr>
<td>Markham, Ontario L3R3L4</td>
<td></td>
</tr>
<tr>
<td>CANADA</td>
<td></td>
</tr>
<tr>
<td><strong>For Bond, Protect and Beautify</strong></td>
<td></td>
</tr>
<tr>
<td>Technologies</td>
<td></td>
</tr>
<tr>
<td>Sames Kremlin France</td>
<td></td>
</tr>
<tr>
<td>13 Chemin de Malacher, 38240 Meylan,</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
</tbody>
</table>
Thank You

Contacts:
Managing Director
Prafullakumar Khachane
+91 20 65101457
+91 9921001880
Email-
praful@geometrixar.com
prafulkhachane@geometrixar.com
info@geometrixar.com
Web: www.geometrixar.com

Looking Forward To Have A Mutually Benefited Business Relationship With Your Esteemed Organization