

# Vikas Raikwar

.. Instrumentation and Control Engineer ..

Add: 7,Nearby Hotel Heritage Conventions,Kanera Dev, Sagar[M.P.] – 470002

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digital version !



## PROFILE OVERVIEW

Experienced and skilled Instrumentation & Automation Engineer with over 6.5+ years of hands-on experience in automation-driven food and dairy processing plants. Possess strong expertise in electronics, with a focus on robotics, embedded systems, UAVs, and PCB design. Adept at implementing industrial automation solutions and troubleshooting complex systems. Demonstrated ability to deliver effective technical presentations and communicate clearly with both technical and non-technical stakeholders. Proficient in computer systems and web design, with a solid understanding of operating systems and user interfaces.

## CORE COMPETENCIES

- ROBOTICS
- PCB DESIGNING
- SCADA (SEIMENS TIA V15.1)
- PYTHON
- PLC PROGRAMMING
- EMBEDDED SYSTEMS
- PROTEUS(SIM.)
- NETBEANS IDE
- HOME AUTOMATION
- INTERNET OF THINGS(IOT)
- UAV'S
- WORDPRESS
- ARDUINO IDE
- JAVA (PROGRAMMING LEVEL)
- PNEUMATIC SYSTEMS

## EDUCATIONAL QUALIFICATION

Examination	School/ College	Year of Passing	CGPA / Percentage%
B.E. ( Electronics & Communication Engineering) [R.G.P.V. Bhopal]	B.T. Institute of Research & Technology, Sagar	2014 - 2018	71.1 %
XII (CBSE)	Vatsalya Sr. Sec. School, Sagar	2013 - 2014	57.2 %
X (CBSE)	Vatsalya Sr. Sec. School, Sagar	2011 - 2012	64 %

## WORK EXPERIENCE

- SANCHI MILK PRODUCTS  
[BKDS - Instrumentation Engineer]  
(Present)

Working as Instrumentation Engineer at Sanchi Milk Production Plant located in Sagar (M.P.).It is a well reputed co-operative firm and manufactures milk products such as processed milk , curd, sweets etc at large scale with capacity of 75000 litres/day as well as Sanchi also have cattle feed plant with production capacity of 100 MT/day .Both Plant have automated production line & products manufactured are supplied.

### Role:

- To look after whole production process of both plants as well as debugging & analyzing faults occurring between production process
- To look for whole plant maintainance including hardwares ,softwares as well as mechanicals of plant machinery

**Technology Used :** PLC integrated automation & Instrumentation

**Experience :** 3 years

## ACADEMIC ACHIEVEMENTS

- Rank 1,** World Skills 2021 – MP Skills under **Mechatronics** trade at Symbiosis University, Indore (M.P.)
- Rank 1,** World Skills 2018 – MP Skills under **Mechatronics** trade at Global Park, Bhopal (M.P.)
- Rank 1,** Project Exhibition at Horizon Techfest 2015-16 B.T. Institute of Research & Technology 4<sup>TH</sup> Semester, B.E.
- Rank 1,** Robo-Race at Horizon Techfest 2015-16 B.T. Institute of Research & Technology 4<sup>TH</sup> Semester, B.E.

- **Rank 2,** **Quiz Competition** at inter-department Quiz Competition 2015-16 B.T. Institute of Research & Technology 4<sup>TH</sup> Semester, B.E.
- **Rank 2,** **Robo-Race** at Horizon Techfest 2016-17 B.T. Institute of Research & Technology 6<sup>TH</sup> Semester, B.E.
- **Rank 2,** **Robo-Race** at Prabhav Techfest 2016-17 Infinity Institute of Research & Technology 7<sup>TH</sup> Semester, B.E.

## PROJECT/TRAINING/SOFTWARE PROFICIENCY

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- **LIVE PROJECTS:**  
(Running)  
  
Designing efficient **AI – DOCTOR** which can read symptoms and detect issues with body and provide ways of diagnosing on emergency basis .  
  
Working on **E-Bike / E-Car technology** for less energy consumption and designing control System based on IOT & embedded solutions  
  
Designing **Website** using **AI & WordPress technology** for updating my status and projects I usually design & implement.
- **MAJOR PROJECT :**  
Robotic Arm with teach-in function  
Robotic Arm implemented using ATmega328p micro-controller ,micro servo motor(SG90) & 3D printed parts .Technically based on Analog value control which are provided as input for arm movement in 4DOF .Consist of teaching algorithm which records analog value in array in record mode & executes movement of robotic arm for infinite loop when play-mode is active.
- **MINOR PROJECT:**  
Automatic rotating solar panel with self calibration system  
**Automatic rotating solar panel** designed for automatic rotating towards high photonic rays for getting maximum efficiency from sun rays and transform into electrical energy by using solar panel.It is sensor less rotating solar panel which works on principle of maximum efficiency ,it automatically detects and calibrate itself to the direction getting maximum energy with help of servo motor(SG-90).
- **QUADCOPTER:**  
PID controlled **self level DRONE** which can lift 1.5kg weight and can be controlled through transmitter within range of 500m (Dia.) video recording and other application such as monitoring and surveillance can be done.Arduino Nano & MPU6050 Gyro was used for making flight controller with Bluetooth (HC-05) and FLYSkyTransceiver system which works on frequency range of 2.4 GHz.
- **OTHER PROJECTS :**  
3D Printer, Wireless Bluetooth Controlled BOT,GSM Based Automatic Distribution Pole Cut-off with Temperature Monitoring System,DTMF robot, Automatic soil-moisture control system with moisture sensor.
- **BASIC TELECOM TRAINING :**  
BRBRAITT -BSNL Jabalpur (M.P.)  
Basic Telecom. Training in which overview of Telecom & mobile network,losses in wired & wireless networks,optical fibre communication with transmission &reception, mobile technologies & its generations, FTTH technology with access& transmission networks,basic principles of electronic changes,next generation networks,IOT and detail information about internet & IP addresses werediscussed & practical information was provided during training session.
- **SOFTWARE PROFICIENCY :**  
Adobe Photoshop ,Express PCB,Proteus,MultiSim(Basics) ,Arduino IDE,Netbeans,,Fritzing PCB, MATLAB(Basics), Microsoft Office 2007(Basics), AutoCAD 2010 (Basics),NetBeans 6.0(Basics) ,TIA PORTAL,WPL soft,GX Works,Autoshop(Innovance),FluidSIM,Simatic Manager 7,WPLsoft,Inkscape,Fusion 360,Solidworks 2019( Basics).
- **PROGRAMMING LANGUAGES:**  
C++,Embedded C(Basic),JAVA,HTML(Basics), PYTHON(Intermediate) ,Ladder.

## PLC & AUTOMATION

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- **INDUSTRIAL AUTOMATION :**  
Have experience in Siemens /Delta/Mitsubishi/Innovance PLC programming for automating industrial devices and equipment such as elevator ,conveyors, processing machines as well as commissioning of various industrial sensors.

Professionally Worked& Attended Service calls with:

- HERSHEY'S CHOCOLATE PRODUCTS
- TREELY AGRO [Particle Board Manufacturing Industry]
- SANCHI MILK PRODUCTS

- **HOME AUTOMATION:** Have experience in Home Automation with IOT & microcontrollers programming for automating Home equipment's such as fan ,switches, surveillance & monitoring with embedded technology sensors .

## CO-CURRICULAR ACTIVITIES

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- **WORKSHOPS :** Ethical Hacking, Quadcopters, Robotics, Wireless Robots, MATLAB, Line & Maze follower robot.
- **CERTIFICATIONS:** **Interfacing of Microcontrollers at ROBOTRONIX, Jabalpur [M.P.], Wireless Robotics at ROBOTRONIX, DAVV Indore [M.P.], Basic Telecom Training at BRBRAITT,Jabalpur [M.P.], Quadcopters at IIT Roorkee.**

## ACHIEVEMENTS EXTRA-CURRICULAR

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- **RoboWar Co-ordinator**, at Horizon Techfest 2016 BTIRT- Assisted to manage the Robowar field and verifying Robots per allotted criteria.
- **Badge Holder at Soft skill Development Session**, BTIRT- Served as group leader for maintaining discipline and promoting importance of communication skills.
- **Co-ordinator of Online Exam**, BTIRT - Assisted to look after students occurring in exam and give information regarding online exam software.
- Honoured & awarded as **Super Student**,BTIRT - In recognition of loyalty,leadership,sincerity & determination &Displayed during soft skills development program.
- Workshop Organizer at BTIRT ,Sagar - Organized workshop on wireless Bluetooth robotics at BTIRT campus, Sagar (M.P.)
- Workshop Organizer at Shailesh Memorial School,Sagar - Organized workshop on Basic Electronics for 9<sup>th</sup> -12<sup>th</sup> standard students.
- Represented Madhya Pradesh at **World Skill India 2018**- Under Mechatronics skill, represented M.P. State in regional competition at World skill India 2018 held at JECC,Jaipur (Rajasthan).
- **Technical Co-ordinator**, at technical workshop,BTIRT - Exhibited skills in software related queries,component monitoring & PCB designing at basic electronics workshop at BTIRT campus,Sagar(M.P.)
- Honoured as **Official Web Developer**,BTIRT - Official web developer for www.satishb3anand.com under supervision of International author- Satish B3 Anand

## AREAS OF INTEREST

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- **Embedded systems** - Making projects with microcontrollers such as 8051,AVR,Arduino with implementing various modules &sensors like Temperature,accelerometer,gyro,Proximity,Infrared sensors & GSM module and many other sensors with digital circuits
- **Robotics & UAV's** - Making bots with various functions like gesture controlled,light & line following,maze solving bot and UAV's like Quadcopter,airplane with wireless protocols such as wifi,2.4ghz RF,Bluetooth.
- **PLC & Automation** - Skilled in developing logic for automating and controlling industrial equipment and processes. Experienced in integrating and configuring a wide range of VFD & Soft-starters , industrial sensors, including reflectometers, inductive sensors, and color sensors,wireless and Serial communication with RS232 ,RS485,RS422 to enhance system functionality and efficiency.

## DECLARATION

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I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Date & Place : \_\_\_\_\_

**Vikas Raikwar**