

Shahyan Bharucha

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SUMMARY OF QUALIFICATIONS

- Over 5 years of experience in industrial electronics for a reputed FMCG company.
- Over a year and several successful project completion experience in part-time freelance in embedded & hardware design (portfolio available on my website www.shahyanbharucha.com/projects).
- Strong background in electronics, instrumentation and embedded programming.
- Proven skills in installation, rectification and maintenance of industrial systems.
- Being recognized as a trainer, giving regular training on various topics to staff.
- Being awarded the star of the month for carrying out cost saving by finding alternates of sensors, VFD's and other imported equipments installed in our glass bottle line available in the local market.
- Professional communication skills include fluency in spoken and written English. Which is effectively used to communicate with various international clients.
- Graduate in electronic engineering from a reputable university in Karachi, Pakistan.

KEY SKILLS

EAGLE 9
Altium Designer 17
MCU AVR & ARM
Proteus 8
Free CAD

Arduino
Fusion 360
IOT NodeMCU
Embedded C
PYTHON

PLC Siemens
PLC OMRON
Various VFD's
Ladder Logic
Sensors

Troubleshooting,
Maintenance & Repair
Nextion HMI
Html, CSS, Javascript
Processing, Fritzing

PROFESSIONAL EXPERIENCE

Electronic and Instrumentation Engineer

2015 – 2020

Pakistan Beverages Limited(PepsiCo. Bottlers), Karachi, Pakistan

- Gained knowledge and hands on experience by working on Krones (German) PET and canning line & SIDEL (French) PET Aquafina line, Techlong(Chinese) bulk water lines, Centrifill(Italian) canning line, ICE(French) & Aquamatch(Turkish) water treatment plants and Van Der Molen(German) sugar dissolving plant.
- Utilizing quick thinking and problem solving skills in performing rectifications on faulty machines with the latest industry technology and standards having good hands on knowledge and understanding regarding Siemens Simatic PLC, B&R PLC(X20), B&R Automation PC & HMI's, Servodrives (B&R Acopos), VFD's (Danfoss), proportional valves (Siemens), various types of industrial sensors (Leuze, Peprl+FUCHS & OMRON), induction & servo motors, encoders.
- Ordered annual E&I spares for the entire factory, by analyzing the current stock status and estimating critical spares and future stock usage, utilizing SAP ERP and ECAT and Msexcel for this. This led to reduce amount of order cost with minimizing the risk of plant stoppage due to the shortage of spares.

- Trained the machine operators regarding the safe handling of E&I equipment to avoid personal injuries and equipment malfunction due to malpractices. Course of following years it was observed this reduced the failure in control equipment caused by human negligence.
- Represented the electronics department during the entire period of installation, commissioning and testing of the latest Krones Ergobloc(31,500bph) line. Working with the Germans Krones E&I team by assisting them in their daily electronic and instrumentation installation and commissioning activities and providing them support regarding their requirement of spares. Moreover, making a daily report on the activity carried out and bottlenecks observed during this period. Learning valuable information regarding the line during the process and passing it on to my team members, which resulted in faster rectification and easier maintenance.
- Formulated indepth monthly E&I downtime and costing reports, to be utilized as an indicator of the department's performance and spare utilization. Moreover, modified the previous format used for the report in excel minimizing the need of manually inputting data, thus saving time and eradicating errors.
- Replaced previously installed Alen Bradly VFD's in our old bulk water line with Danfoss VFD's by doing a parameter and specification matching. This resulted in cost savings and spare availability.
- Being awarded the **star of the month** in for carrying out cost saving by finding alternates of sensors, VFD's and other imported equipments installed in our glass bottle line available in the local market.
- Being recognized as a **trainer**, giving regular training on various topics to staff.

Part Time Freelance Hardware & Embedded Engineer

2019 – 2020

Guru.com, Karachi, Pakistan

- Provided freelance solutions for international individual and cooperate clients from USA, Belgium, Singapore & South Africa. Utilizing effective written and verbal communication in securing and delivering projects.
- Completed fourteen successful projects working part time having 100% satisfaction rate from the clients having 75% recurring client rate.
- Programming microcontrollers from Atmel and ARM using Embedded C & Python on baremetal and platforms such as Arduino and RaspberryPi having indepth knowledge of advance programming concepts such as RTOS & IOT.
- Designing PCB's using EagleCad, Altium designer or KiCad depending on clients requirements.
- Creating 3D parts such as enclosures and 3d pcb's visualization using Fusion360 and FreeCad.

Deputy Manager- Risk Management & Engineering

2014

Jubilee General Insurance, Karachi, Pakistan

- Surveying factories belonging to various industries to analyze risk involved in their operations & prepared reports used as reference during underwriting.

SELECTED PROJECTS (details on shahyanbharucha.com/projects)

- *Embedded anti-theft detector board with sim7000 & at1284p microcontroller*

- Cartesian 3d printer designed and built from scratch
- PCB designs for gyro ECU & display according to provided dxf
- Vending machine concept controller with GUI using processing
- Sliding door control unit with user interface and sound
- Altimeter with altitude control chute release
- Industrial valve controller with short circuit detection & auto reset
- Bluetooth haptic feedback bike controller for virtual cycling
- Pneumatic valve controller using ARTNET or DMX

PUBLICATIONS

Real Time Finger Counting and Virtual Drawing Using Color Detection and Shape Recognition (Electronic ISBN: 978-1-4799-2622-0)

- A research included testing the algorithm on various conditions and notifying results.
- The algorithm and program is created using a Matlab Image processing toolbox.
- The research paper was published in ICICT 2013 conference (IEEE Explorer).
- The research paper was also presented by me in the ICICT conference.

Remote Microcontroller Based Monitoring of Substation and Control System through GSM Modem (ISSN 2229-5518)

- The paper introduces a way of making substations smarter by analyzing it's electrical parameters and comparing it with its rated value to protect the distribution and power transformer from burning due to overload, short circuit fault, over voltages and surges, also providing real time information via GSM.
- The paper was published in International Journal of Scientific & Engineering Research, Volume 6, Issue 1, January-2015.

TRAININGS

Programmable Logic Controller

NED University of Engineering and Technology CCEE Academy, Karachi, Pakistan

Boilers in Industries(Maintenance, Operation & Safety)

NED University of Engineering and Technology CCEE Academy, Karachi, Pakistan

Fire Prevention & Safe Chemical Handling

BUREAU VERITAS HSE - INDUSTRIAL, Karachi, Pakistan

EDUCATION

Bachelor in Electronic Engineering(First Division)

2010 - 2014

NED University of Engineering and Technology, Karachi, Pakistan

(Equivalent to a Bachelor of Electronic Engineering degree from an Ontario university, as determined by World Education Services in Toronto, ON)

Pre-engineering

2007 - 2009

Saint Patricks College, Karachi, Pakistan

(Equivalent to a secondary school diploma from an Ontario secondary school, as determined by World Education Services in Toronto, ON)