Raj Choksi

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E-Mail	**rajchoksi97@outlook.com**
Tel	**(+49)17634570492**
Born	**29.11.1997 in India**
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Linkedin	**https://rajcks007.github.io/Portfolio/**

Professional career

10/2024 – Present

Master Thesis
FAST GmbH
- Automated tests for circuits, battery parameters, LEDs (with LDR), LCD screens, and ceramic sensor systems.
- Implemented voltage tests for ICs and battery performance tests for current and voltage measurement during charging.
- Used OpenCV on a Raspberry Pi to evaluate LCD screens.
- Managed test processes with an STM32 microcontroller.
- Simulated real-world conditions using vibration tests for ceramic sensors with a speaker.

12.2019 – 11.2021

MAINTENANCE AND DEVELOPMENT ENGINEER
Dolphy India Pvt. Ltd.
- Maintained and troubleshot electronic hardware, including PCBs and devices.
- Developed IoT projects using C programming on ESP32 microcontrollers, such as a water flow measurement system.
- Led a team to develop cost-efficient hardware, achieving a 15–20% cost reduction through strategic component and supplier selection.

05.2019 – 11.2019

TRAINEE ENGINEER
Heldin heinz glass Pvt. ltd.
- Installed and maintained electrical systems.
- Repaired and diagnosed electrical devices to reduce downtime and improve efficiency.
- Programmed PLCs and updated existing programs to optimize devices.

Projects

10.2022 – 02.2023

Puls-Oximeter (Master- Project)
- Developed a wearable medical device for continuous SPO2 and heart rate monitoring.
- Created a graphical user interface using object-oriented Java programming for real-time data visualization.
- Implemented low-level communication protocols such as I2C, SPI, and UART.

10.2022 – 02.2023	**Acceleration and temperature measurement with ATMEGA32**
	• Designed a circuit with acceleration and PT-100 temperature sensors.
	• Simulated and tested components using LTSpice.
	• Collected and processed data using C programming.

04.2018 – 03.2019	**Motor protection and control with PLC, drive and HMI (Bachelor's Project)**
	• Developed a system for motor protection and control to prevent errors and regulate speed.

Education

04.2022 – Present

MASTER IN EMBEDDED SYSTEMS DESIGN
at Hochschule Bremerhaven
Subject: VHDL, System on Chip(SoC), Maritimes System, Industrial System, Mechatronic, Modal basic software design, Medical System

06.2016 – 03.2019

BACHELOR IN ELECTRICAL ENGINEERING
at Gujarat Technological University, India
Subject: Power electronics, Microcontroller and Microprocessors, Analog device, Electrical machine, Machine design, Electric drive

05.2013 – 03.2016

DIPLOM IN ELECTRICAL ENGINEERING
at Gujarat Technological University, India
Subject: Electrical machine, Energy transmission, Electrical materials, Electrical measurement and measuring device

Further knowledge & skills

Languages	**English -** Fluent (C1)
	German - Basic knowledge (A2)
	Hindi & Gujarati - Native languages
Programming languages	Embedded-C, C++, Java, VHDL, Python
	Communication Protocols: I2C, SPI, UART, CAN
Software knowledge	IAR, MATLAB-Simulink, LTSpice, Xilinx SDK, Proteus, Eclipse, Ki-Cad, Siemens TIA
Other skills	Git-Hub, Microsoft Office (Word, Excel), Linux