

SHADAB SHAIKH (M)

EMBEDDED SYSTEMS AND SOFTWARE ENGINEER

EXPERIENCE

WORKING STUDENT / MASTER THESIS – ADAS

Efficient On-Device Traffic Sign Detection Using Edge Machine Learning

AVL Software and Fucntions GmbH, Regensburg Germany

08/2024 – Current

- Developing and optimizing machine learning models for traffic sign detection on embedded devices.
- Focusing on resource efficiency and real-time inferencing on CPU-based systems.
- Balancing computational performance with hardware constraints for edge deployment.

WORKING STUDENT – AUTOMATION SOFTWARE

DEVELOPER

TESTIA GmbH, Bremen Germany

01/2024 – 07/2024

- Development of Automation Tasks in Python for Synchronisation of user information across various company databases
- Managing mobile devices directory using GLPI

SENIOR ENGINEER - EMBEDDED SYSTEMS

NHANZ SYSTEMS PVT. LTD., Bangalore, India

07/2020 – 03/2023

- Development of Full Software Architecture of a Motor Controller for EVs
- Research on optimizing the efficiency of the Motor Control Algorithms
- Module Testing using Ceedling Unit Test for Test Driven Development
- Defining the HSI (Hardware Software Interface) for the Motor Controller

EMBEDDED SYSTEMS DEVELOPER (TCU APPLICATION)

INMOTIVE INC., Bangalore, India

07/2020 – 07/2022

- Firmware development for TMS570 Microcontroller Platform
- Transmission Control software reprogramming
- Curtis Motor Controller reprogramming
- System Testing on Dynamometer

CONTACT

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ABOUT ME

Motivated Student currently pursuing a master's degree in Embedded Systems Design. Valuable working experience in the research and development of software architecture, design and testing of products. Comprehensive knowledge in the field of Embedded Systems, Computer Programming and recently in ADAS.

Date of Birth: 20.05.1996

Nationality: Indian

Family Status: Single

EXPERTISE

Languages

English: Native Proficiency

German: Good

Software-Expertise

C/C++: Excellent

MATLAB/SIMULINK: Very Good

Python: Very Good

Other-Skills

Motor Control Algorithms

Electric Vehicle Architecture

Onnxruntime

Tensorflow

ADAS (Autonomous Parking)

Image Processing

Real Time Operating Systems

Model Based Design

HIL/SIL Testing

ARM Microcontrollers

Version Control : GIT

EXPERIENCE

FIRMWARE DEVELOPMENT CONSULTANT

BIODESIGN INNOVATION LABS, Bangalore, India

05/2020 – 07/2020

- State-machine development for HMI frontend and backend programming
- Defining the HSI for a Ventilator Controller Architecture
- Servo Motor Control Programming and UART Communication interfacing.
- Product Validation testing

EMBEDDED SYSTEMS ENGINEER

EMFLUX MOTORS PVT. LTD., Bangalore, India

07/2018 – 04/2020

- Direct Software Development for the EMFLUX ONE Electric Motorbike
- Simulink based Model Design of the Motor Controller Algorithm
- Induction Motor Control Algorithm Development
- Data Acquisition Software in Embedded Linux & Hardware Development
- CAN Communication Architecture Design for Prototype ECU/Master Controller

EDUCATION

Masters in Embedded Systems Design

Hochschule Bremerhaven, (Bremerhaven, Bremen)

04/2023 – today

Topics of focus: Digital Systems, Discrete Control Systems, VHDL, Model Based Design, SOC Design, Industrial Systems

Semester Project: Semi Autonomous Parking

- Designed and implemented Autonomous Parking Using Ultrasonic Sensors in micropython on a Linux Based OS
- Requirements and Specification analysis
- The trajectory of an autonomous car was modelled in MATLAB
- Implemented on HARDWARE using Lego Mindstorm Platform

Bachelors in Electronics and Communication

Savitribai Phule Pune University, (Pune)

09/2014 – 07/2018

Topics of focus: Analog Circuits, Communication, Digital Systems, Control Systems, Image Processing, AI/ML

Project: e-Health Monitoring using rPPG:

- Contactless Heart rate detection using video of Human Face
- Algorithm Design in MATLAB
- Digital Signal Processing
- Image Processing

Certificates

- Advanced Driver Assistance Systems (ADAS) : Certificate

EXPERTISE

Other-Skills

Bootloader

CAN Communication

Documentation (Doxygen)

MISRA C and AUTOSAR

Debugging : GDB

Sensor Technologies: Camera

Systems, Ultrasonic Sensors

Soft Skills:

Problem-Solving, Collaboration,

Agile Project Management

Date: 06/08/2024

Signature:

