



Ram Prasanth Udhaya Baskar

Firmware Engineer at congatec GmbH

- ▶ Indian citizen
- ▶ Deggendorf, Germany
- ▶ Single

Programming Skills

C++

C

Rust

HTML, CSS

Bash Scripting

Python

Technical skills

Software Engineering practices

Software testing

Profile Statement

I am a Firmware Engineer working on x86 UEFI Firmware written in C. I am looking for a job position to focus my career as a C++ programmer. Kindly find my C++ projects in [my portfolio website](#).

Work experience

Software Engineer BIOS - Full-time

01/2024 - Today

x86 R&D BIOS
Congatec, Deggendorf, Germany

We work on developing and adapting UEFI Firmware features for congatec's products based on x86 CPU architecture.

Key tasks:

- Adapting UEFI Firmware (BIOS) for congatec's intel chip based Computer On Module (COM) and Single Board Computer (SBC) products.
- Implementing congatec specific BIOS, OS and, congatec-board-controller (cBC) features into the BIOS.
- More Info: <https://www.congatec.com/de/technologien/embedded-bios/>
- Intel Slimbootloader adaptations for congatec products

Junior Software Engineer BIOS - Full-time

04/2023 - 12/2023

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Student - Junior BIOS Engineer R&D - Part-time

09/2022 - 04/2023

x86 R&D BIOS
Congatec, Deggendorf, Germany

Develop, test AMI BIOS for x86 embedded computers

Student Assistant - Technical Document Writing - Part-time

07/2021 - 10/2021

Chair of Dynamical Systems
University of Passau, Germany


Technical document writing for the course Mathematical Control Theory offered by Chair of Dynamical Systems, University of Passau

Professional skills

Documentation skills



Communication and presentation skills



Certifications

- [C++ nanodegree program](#)
- [CMake Zero to Hero](#)
- [Bash Scripting and Shell Programming](#)
- [Rust crash course](#)
- [Intro. to Battery-management systems - Coursera](#)
- [ASPICE - Vector GmbH](#)
- [Beginner Embedded C Programming - Udemy](#)
- [MATLAB Certification - Mathworks](#)
- [Deep learning using MATLAB - Mathworks](#)

Languages

Tamil L1



English C1



German B2



Contact

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in [LinkedIn](#)

Student Intern - Advanced Security Engineering Lab

10/2020 - 04/2021

Chair of Computer Engineering
University of Passau, Germany

UNICARagil research project - Advanced Security Engineering Lab (12 ECTS)

- Topic of the practical project - Securing-In Vehicle Traffic
- Programming Languages - Embedded C, Python
- Communication protocols - CAN, Ethernet
- Goal of the project - Improve the existing Security of the In-Vehicle network
- Cryptographic concepts learned - Elliptic Curve Cryptography, Implicit Certificates, Plain Galois fields
- Link to UNICARagil - <https://www.unicaragil.de/en/>

Student Intern - Research Internship in Systems Engineering

06/2019 - 12/2019

Chair of Dynamical Systems
University of Passau, Germany

Simulation and Hardware implementation of Self-balancing robot - Team project

- Hardware - Raspberry Pi 3b+, NiMH Batteries, NEMA 17 bipolar DC stepper motor, Inertial Measurement Unit (IMU) 6-axis (Gyro + Accelerometer)
- Programming Language/Environments - MATLAB/Simulink and Python
- Communication protocols - I2C, SPI
- Control method - Linear Quadratic Regulator (LQR)
- Measurement estimation - Kalman Filter (KF)
- Name of the course - Research Internship in Systems Engineering (8 ECTS)

Test Engineer - Full-time

09/2015 - 12/2017

Infosys Limited, India

Data Warehouse/Data Migration Testing

- Tasks - Test Strategy, Test cases writing, Test Execution, Knowledge Transfer, Ownership of handling Test Applications
- Tools and Technology - Unix Scripting, Oracle SQL, MS SQL, Ab Initio, MS Office
- Documentation skills - Defect documentation, Test case writing, Documentation of rare (special) scenarios
- Test management tool - HP ALM
- Communication skills - Presenting test strategy, test results (retrospective), and defects discussion
- Clients - Royal Bank of Scotland, Suntrust Bank

Systems Engineer Trainee - Full-time

05/2015 - 08/2015

Infosys Limited, India

Test Engineer Training phase (with Job-Entry Examination)

- Foundation level training - Object-Oriented Programming in Java, Oracle SQL queries, HTML and CSS, Software Engineering
- Advanced level training - Unix scripting, Oracle SQL, MS SQL (including stored procedures, triggers), Informatica (Creating DataWarehouses and Databanks), Data Warehouse Testing, HP UFT (test automation), HP ALM (test management tool), Business Intelligence (BI) using IBM Cognos
- Internally ISTQB Foundation level certified

Education

M.Sc. Mobile and Embedded Systems

04/2018 - 03/2024

University of Passau, Bavaria, Germany

Coursework: Advanced Security Engineering Lab, Internship in Systems Engineering, Sensor Data Fusion, Mathematical Control Theory, Software Engineering, Hardware-oriented security, Deep Learning, Functional Safety

B.E. Electronics and Instrumentation Engineering

08/2011 - 03/2015

Anna University, Tamil Nadu, India

Coursework: Digital Logic Circuits, Electronic Circuits, Microprocessors and Microcontrollers, Control Systems, Transducer Engineering, Object-Oriented Programming, Data Structures using C, Virtual Instrumentation, and LabVIEW laboratory course