

CURRICULUM VITAE

Name **Mallikarjun Tirlapur**
Date of birth **22.04.1988**
Telephone **+4917670224302**
E-mail tirlapurmallikarjun@gmail.com
Website <https://mallikarjuntirlapur.github.io/>
Address **Buchen Str. 05,
86179, Augsburg, Germany**



OBJECTIVE

A Challenging position, which keeps me abreast with new technology, allows me to show my capability to full strength, so that the growth of the company and me should be eminent.

WORK EXPERIENCE

Staff Embedded Software Developer

01.02.2016 –

Infineon Technologies AG, Augsburg.

- Developing Java Card Operating System (Embedded C) on Infineon microcontrollers in a scrum team.
- Implementing Java Card OS features based on the latest Oracle Java Card specifications.
- Worked on payment and electronic ID projects.
- Built threat modeling against various attacks on card Java Card OS and implemented counter measures (secure coding).
- Built MPU architecture and configured memory layout for the OS.
- Being Configuration Manager wrote a CM plan for the team for many projects.
- Established code review standards in the team.
- Implemented I2C low-level driver for CB interface.
- Implemented JC API interfaces for the fingerprint enrollment and detection on the card.
- Built various software tools to facilitate daily software continuous integration process.
- Procured good knowledge on Cryptography concepts, Secure messaging schemes, and Authentication schemes.
- Developed various java card applets.
- Trained and experienced on ARM architecture.
- Knowledge on standards: ISO 7816, ISO 14443
- Knowledge on Specifications: Oracle JCVM, JCRE, JC API, EMV, Global Platform specifications

Embedded Developer

01.11.2015 – 31-01-2016

COBI-Connected Biking for everyone, Frankfurt.

- Developed PWM low-level driver for driving RGB channels of LED light of the bike.
- Bug fixing, test case implementation.
- Procured knowledge in CAN bus e-bike driver development.

Master Thesis

01.04.2015 – 30.09.2015

KUKA Roboter GmbH, R&D Technology Development, Augsburg.

Research Topic: A framework for non-expert robot programming facilitated by a self-localizing smart device.

Objective: A smart device (Project Tango Smartphone) equipped with high-end sensing capabilities facilitates the programming of industrial robots in the field of logistic tasks such as pick-and-place and packaging.

- Created requirement analysis, compared and used computer vision state-of-the-art algorithms and APIs.
- Developed an android app to publish on touch 2D pixel coordinates.
- Developed algorithms and implemented in C++ on ROS platform to locate objects.

Internship

01.09.2014 – 28.02.2015

KUKA Roboter GmbH, R&D Technology Development, Augsburg.

Research Project: Developing pick-and-place robotic applications using Project Tango Smartphone on ROS (Robot Operating System) platform.

- Developed an android app from scratch to parse super frames for depth & RGB images and publish live images into

ROS network over (Wi-Fi).

- Realized 2D to 3D transformation algorithm.

Application Engineer

05.07.2010 –19.08.2013

Microchip Technology Private Ltd (INDIA), Bangalore.

- Developed peripheral validation libraries for PIC microcontrollers in C.
- Developed magnetic stripe reader embedded software & hardware application.
- Reviewed and responded to internal and external customer inquiries.
- Responsible for providing embedded solutions to customers and promoting to use of microchip's PIC microcontrollers and other products.

EDUCATION

**Hochschule Darmstadt,
Germany
Sep 2013 – Feb 2016**

Masters in Electrical Engineering
System Design (C++ & UML), Technical Project Management, Design and Test of Microelectronic Systems (FPGA & ARM), Complex Digital Architectures, Advanced Feedback Control (Matlab & Simulink), Advanced Automation (Matlab & PLC), and Advanced Robotics.

**The National Institute Of
Engineering, Mysore
Sep 2006 – June 2010**

Bachelor of Engineering in Electronics and Communications Engineering
(First Class with Distinction).
Basic and advanced Mathematics, Object Oriented Programming using C++, Data structure using C++, Image processing, Electronic Circuits and Design, Signals & System, Digital Signal Processing, Analog and Digital Communication, Microcontrollers, Microprocessors.

SKILLS

General: Good understanding on - concepts in microelectronics, embedded systems, mathematics, object oriented programming, java card, microcontrollers and robotics.

Programming Languages: C, C++, Python, C#, Java and Assembly.

Microcontrollers & Processors: ARM Cortex, PIC microcontrollers.

Microcontroller fundamentals: Cache, Interrupts, Power control modules, ADC, DAC, Timers, PWM, DMA, WDT, RTCC, IC, OC, and PTG.

Communication Buses: SPI, I2C, RS-232, and CAN.

IDEs: Keil uVision, Eclipse, Visual Studio, Android Studio, MPLAB 8, and MPLAB X.

Software tools: Git, Gerrit, BitBucket, Git Extension, Jenkins, LabVIEW, Borland Together (UML).

Lab Equipments: Agilent & Tektronix Oscilloscope, Function generator, Digital multi-meters, DC Power supply, Thermonics, Soldering.

Industrial Robots: Programming KUKA LBR iiwa 7 R800.

Languages: English & Hindi (native proficiency), German (B1), and Kannada (mother tongue).

Other Skills: Assembly level debugging, Byte Code debugging, Software Configuration Management, Presentation, Test Automation, Documentation, Unit Testing, PCB Design and Soldering, Requirement analysis.

PERSONAL TRAITS

- Willing to learn new technologies.
- Self-motivated.
- Able to understand work responsibility and follow accordingly.
- Good resource management and a self-starter.

HOBBIES

Yoga, Badminton, Cycling and Hiking.

(Mallikarjun Tirlapur)