Ram Prasanth Udhaya Baskar

Student, M.Sc. Mobile and Embedded Systems, University of Passau

Programming Skills

C++

C

Python

HTML and CSS

JavaScript

MATLAB/Simulink

Technical skills

Software Engineering practices

Quality Assurance

Profile Statement

I am a master's student, passionate programmer, and engineer with prior full-time work experience as a Software Engineer. Having almost finished my Master's degree, I am seeking a full-time career as a Software Developer.

Education

M.Sc. Mobile and Embedded Systems — 04/2018 - Present
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

Work experience

Student Assistant - Technical Document Writing — 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

Masters Student - 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
- Tasks performed - Re-implement the existing In-Vehicle ECU Network, HMAC implementation using BearSSL, and other security tasks such as ensuring the randomness of the seed for the key, ensuring robust connection and communication
- Hardware (used to simulate ECUs) - RaspberryPi 3b+, ESP32EVB
- Operating System - Ubuntu 21.04
- Other tools involved - Cross compilers for the simulated ECUs, Build Automation using CMake
- Cryptographic concepts learned - Elliptic Curve Cryptography, Implicit Certificates, Plain Galois fields
- Link to UNICARagil - https://www.unicaragil.de/en/

Professional skills

Documentation skills

Communication and presentation skills

Certifications

- Intro. to Battery-management systems - Coursera
- ASPICE - Vector GmbH
- Beginner Embedded C Programming - Udemy
- MATLAB Certifiation - Mathworks
- Deep learning using MATLAB - Mathworks

Languages

Tamil L1

English C1

German B1

Czech A1

Contact

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Bavaria, Germany

in LinkedIn 𝕏 Xing

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

Passau, January 22, 2022

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