

Hemanth Guruva Reddy

EMBEDDED SOFTWARE DEVELOPER · MECHATRONICS

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Summary

Embedded Software developer with 5+ years experience in open-source development model, cross-site development and writing code close to the hardware, be it for telecommunication or motion-control. Love to learn new technologies, Interested in solving problems, implement efficient solutions on systems with low resources for applications in different industries.

Skills

Spoken Languages	English - Fluent, German - Intermediate
CPU Architectures	x86, Coldfire(v4e), ARMv7 and ARMv6, AVR
System Bus	PCIe, I2C, SPI
Programming	C, C++, Perl, Shell, Python, JAVA, LaTeX
Build Tools	Autoconf, GNU make, Cmake, Buildroot, Bitbake
Operating Systems	Linux kernel, FreeRTOS
Simulation Tools	Matlab/Simulink, LabVIEW
Requirement & Planning	UML, Gantt-Charts

Work Experience

May. 2013 - PRESENT

Ulm, Deutschland

Nokia Mobile Networks

EMBEDDED PLATFORM SOFTWARE DEVELOPER

- Develop for Nokia's customized Linux From Scratch (LFS) distribution for its eNodeB.
- Responsible for framework to manage FPGAs in Linux:
 - Co-ordinate and align design decisions between FPGA designers, Board designers and Linux team.
 - Implement device drivers and device-trees for controllers implemented in FPGA.
 - Implement user-space libraries to used to manage the FPGAs from applications of eNodeB.
 - Manage packaging of FPGA firmwares within Platform Software release cycles.
- Perform Effort Estimation, Breakdown of Requirements into work-packages and derive dependencies between work-packages as part of Feature Planning.
- Co-ordinate activities across multiple Development sites of Nokia.

Jan. 2012 - April. 2013

Ulm, Deutschland

Sysgo AG

EMBEDDED SOFTWARE DEVELOPER

- Work as a Linux Developer for an internal cross-site Japanese Project with Nokia.
- Gather Requirements from Japanese counterparts and implement them in kernel-space and user-space of Linux used within Nokia's eNodeB.

Sept. 2006 - Oct. 2009

Bangalore, India

Novell Software Development. Ltd.

SENIOR SOFTWARE DEVELOPER

- Development & Maintenance of Novell's LDAP servers offered to its customers as part of Infrastructure software.
- Maintain eDirectory LDAP server.
 - develop and debug libSAL (an in-house cross-platform OS abstraction library used within eDirectory).
- Responsible for Quality of eDirectory:
 - Design and implement an in-house automated Test Harness.
 - deploy the test harness as part of effort in continuous integration testing.
- Development of LDAP Proxy server:
 - Implement the requirements from the Product owner & Product architect into components.
- Contribute to kernel-janitors with tiny fixes to Linux kernel.

Projects and Thesis

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| May. 2010 - Sept. 2010 | Master Thesis: Model-in-loop (MIL) Simulation model of a quad-rotor. |
| Weingarten, Deutschland | HOCHSCHULE RAVENSBURG-WEINGARTEN |
| <ul style="list-style-type: none"> Derive mathematical model of a quad-rotor and Implement it in LABVIEW. Model implemented to be imported directly as a functional block for its usage in Model-in-Loop (MIL) simulations by Dr.-Ing Bern Altmann. | |
| Jan. 2010 - Jul. 2010 | Scientific Project: Hardware-in-Loop (HIL) Test Bench of Motorbike Gearbox |
| Weingarten, Deutschland | HOCHSCHULE RAVENSBURG-WEINGARTEN |
| <ul style="list-style-type: none"> Design & Implement a Hardware-in-Loop (HIL) Bench to simulate a Motorbike Gearbox. Co-ordinate with Formula-Student participants who intending to use the test-bench for development of "Gearshift by wire" control algorithm. | |
| Oct. 2009 - Dec. 2009 | Research Project: Control algorithm for a robotic mobile platform |
| Weingarten, Deutschland | HOCHSCHULE RAVENSBURG-WEINGARTEN |
| <ul style="list-style-type: none"> Model the robot & Implement a digital controller for the mobile robot designed to be used as a transporter on a factory floor. | |
| Dec. 2005 - Sept. 2006 | Research Project: Personalized Passenger Alert system on arrival of Destination |
| Bangalore, India | BTL INSTITUTE OF TECHNOLOGY |
| <ul style="list-style-type: none"> Design & Implement a system to wake up and notify a passenger individually on arrival of his/her destination instead of calling out destination names loudly inside the bus as done in rural India. | |

Education

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| 2009 - 2011 | Hochschule Ravensburg-Weingarten |
| Weingarten (Würt), Deutschland | MASTERS OF SCIENCE (MSc) IN MECHATRONICS |
| <ul style="list-style-type: none"> Principles of Mechatronic system development focusing on Robotics and Building Simulation models. was awarded DAAD Scholarship from second semester onward. | |
| 2002 - 2006 | Visveswaraya Technological University |
| Bangalore, India | BACHELORS IN ENGINEERING (B.E) IN ELECTRONICS AND COMMUNICATION |
| <ul style="list-style-type: none"> Principle subjects focused on Electronics, Communication theory, Computer architecture and Embedded system design, | |

Extracurricular Activity

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| 2004 - 2007 | BLUG - Bangalore Linux Users Group (Developers' Network for Linux) |
| Bangalore, India | EARLY MEMBER OF BLUG. |
| <ul style="list-style-type: none"> Now a defunct group, was a platform to share open-source work from developers across the city. An active volunteer in first two FOSS.IN events. promote GNU/Linux by hosting installfest's in my campus. | |
| 2006 - 2008 | eDirectory day |
| Ulm, Deutschland | ORGANIZER |
| <ul style="list-style-type: none"> Organize and host annual hackfest inside Novell to promote awareness and unique applications of LDAP directory. | |
| 2015 - | Indians in Ulm |
| Ulm, Deutschland | VOLUNTEER |
| <ul style="list-style-type: none"> Co-ordinate and organize annual Indian Celebrations in Ulm. A platform for Indians to meetup and grow their Network in the city. | |
| 2016 - | Ulmer Garage - Building a Maker-space within Nokia |
| Ulm, Deutschland | VOLUNTEER |
| <ul style="list-style-type: none"> contribute some spare time towards building a Maker space within Nokia's Ulm site, hosting events to promote maker culture. | |

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| Hobbies | Photography, Graphic Design, Collect Music |
| Outdoor Activities | Football, Hiking & Camping, Squash |