Hemanth **Guruva Reddy**

EMBEDDED SOFTWARE DEVELOPER · MECHATRONICS

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Summary

Embedded Software developer with 8+ years experience in open-source development model, cross-site development, be it for telecommunication or motion-control. Always open 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 **Nokia Mobile Networks**

Ulm, Deutschland EMBEDDED PLATFORM SOFTWARE DEVELOPER

- Develop for Nokia's customized Linux From Scratch (LFS) distribution for its eNodeB.
- Mainly 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 connected to SoC via PCIe/SPI/Bootbus.
  - Implement user-space libraries to used to manage the FPGAs from applications of eNodeB.
  - Manage packaging of FPGA firmwares within Platform Software release cycles.
- Contribute towards implementations for variuous other themes within team when needed.
- 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 **Sysgo AG**

Ulm, Deutschland EMBEDDED SOFTWARE DEVELOPER

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

Sept. 2006 - Oct. 2009 **Novell Software Development. Ltd.**

Bangalore, India SENIOR SOFTWARE DEVELOPER

- Developed & Maintained of Novell's LDAP servers offered to its customers as part of Infrastructure software.
- Maintenance of eDirectory LDAP server.
  - Developed and debugged libSAL (an in-house cross-platform OS abstraction library used within eDirectory).
- Was also responsible for Quality of eDirectory:
  - Designed and implemented an in-house automated Test Harness.
  - Deployed the test harness as part of effort in continuous integration testing.
- Development of LDAP Proxy server:
  - Implemented the requirements from the Product owner & Product architect into components.
- Contributed towards kernel-janitors with tiny fixes in Linux kernel.

Projects and Thesis

Sept. 2010 - Mar. 2011	**Master Thesis: Model-in-loop (MIL) Simulation model of a quad-rotor.**
Weingarten, Deutschland	Hochschule Ravensburg-Weingarten

- Derived mathematical model of a quad-rotor and Implement it in LABVIEW.
- Model was 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

- Designed & Implemented a Hardware-in-Loop (HIL) Bench to simulate a Motorbike Gearbox.
- Coordinated with Formula-Student participants who were 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

- Modeled 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 Institue of Technology

- Designed & Implemented 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

2009 - 2011	**Hochschule Ravensburg-Weingarten**
Weingarten (Würt), Deutschland	Masters of Science (MSc) in Mechatronics

- 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

- Principle subjects focused on Electronics, Communication theory, Computer architecture and Embedded system design,

Extracurricular Activity

2004 - 2007	**BLUG - Bangalore Linux Users Group (Developers' Network for Linux)**
Bangalore, India	Early Member of BLUG.

- Now a defunct group, was a platform to share open-source work from developers across the city.
- Was an active volunteer in first two FOSS.IN events.
- Promoted GNU/Linux by hosting installfest's in my campus.

2006 - 2008	**eDirectory day**
Ulm, Deutschland	

- Organized and hosted annual hackfest inside Novell to promote awareness and unique applications of LDAP directory.

2015 -	**Indians in Ulm**
Ulm, Deutschland	

- 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	

- Contributing some spare time towards building a Maker space within Nokia's Ulm site, hosting events to promote maker culture.

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