Hemanth **Guruva Reddy**

EMBEDDED SOFTWARE ARCHITECT · MECHATRONICS

Personal Info

Name	Hemanth Guruva Reddy
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Birth Place	Bengaluru, Indien
Birth Date	2 July 1984
Status	Married
Citizenship	Indian
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Work Experience

May. 2016 - PRESENT
Ulm, Deutschland

Nokia Mobile Networks
EMBEDDED PLATFORM SOFTWARE ARCHITECT

- In Primary role of Hardware-Software Architect, I co-ordinate with the HW team to align for a final clean hardware design which also favors software re-use. Thereby, targeting faster time to market with less cost in software re-design, plus also support newer boards on an older release made available to customer.
- Work as a lead architect along with product-management, planners, vendors and developers to identify areas of work necessary within current OS that needs to be adapted for a new board introduction into the product portfolio.
- Work on Design of new customer features: Perform Effort Estimation, Breakdown of Requirements into work-packages and derive dependencies between work-packages as part of Feature Planning.
- Work on Feasibility Studies like:
    evaluate the of use of Hardware based Trusted Platform Module (TPM) in comparison with TPM as a service in Trusted Execution Environment (TEE)
    evaluate the migration of certfactes based on RSA to use of ECDSA
- Provide consultation to factory on creation and flashing of private certificates on new board introduction.
- Co-ordinate feature development activities as a memeber of virtual teams spread across multiple physical Development sites of Nokia.

May. 2013 - PRESENT
Ulm, Deutschland

Nokia Mobile Networks
EMBEDDED PLATFORM SOFTWARE DEVELOPER

- Core developer for Nokia's customized Linux From Scratch (LFS) distribution for its eNodeB.
- Maintainer of FPGA subsystem in Linux kernel: implement user-space libraries, kernel drivers to manage FPGA life-cycle. Also managed packaging of FPGA firmwares within Platform Software release cycles.
- As a bootloader developer, implement nokia customization features into uBoot and AMI-BIOS for startup including signed-verified-boot.
- Debug and fix problems in user-space tools and relevant kernel modules to sign installed Software, generate board private certificates, verify installed Software during startup.
- Import, Integrate and Maintain yet to be upstreamed patches to open source components provided by vendors.
- Actively debug and work on various board interconnect technologies like PCIe, sRIO and ethernet.
- Redesign startup of LFS from SysV to systemd in migration to systemd.
- Currently experimenting on collecting analytics from an embedded system to train a machine learning model to detect bottlenecks and perform recovery.

Jan. 2012 - April. 2013
Ulm, Deutschland

Sysgo AG
EMBEDDED SOFTWARE DEVELOPER

- Worked as a Linux Board Support Developer for a Nokia Project for a specific Japanese Customer.
- Collaborated and Gathered Requirements from Japanese counterparts. Implemented them in kernel-space and user-space of Board Support Package used within Nokia's eNodeB.

Sept. 2006 - Oct. 2009

Bangalore, India

Novell Software Development. Ltd.

Senior Software Developer

- Developed & Maintained of Novell's LDAP servers offered to its customers as part of Infrastructure software.
- Under 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, Implemented and Deployed an in-house automated Test Harness as part of early efforts 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.

Education

2009 - 2011

Weingarten (Würt), Deutschland

Hochschule Ravensburg-Weingarten

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

Bangalore, India

Visveswaraya Technological University

Bachelors in Engineering (B.E) in Electronics and Communication

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

Skills

Spoken Languages	English - Fluent, German - Intermediate B1
CPU Architectures	x86_64, Coldfire(v4e), AVR, Cortex-M, ARMv7 and ARMv8a
System Bus	PCIe, I2C, SPI, sRIO, Ethernet
Programming	C, C++, Perl, Shell, Python, JAVA, LaTeX
Crypto Libraries	OpenSSL, mbed-tls
Build Tools	Autoconf, GNU make, Cmake, Buildroot, Bitbake
Operating Systems	Linux kernel, FreeRTOS
Simulation Tools	Matlab/Simulink, LabVIEW
Requirement & Planning	UML, Gantt-Charts

Extracurricular Activity

2016 -

Ulm, Deutschland

Ulmer Garage - Building a Maker-space within Nokia

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

2015 -

Ulm, Deutschland

Indians in Ulm

- Co-ordinate and organize annual Indian Celebrations in Ulm. Started a platform for Indians to meetup and grow their Network in the city of Ulm and Neu-Ulm.

2006 - 2008

Ulm, Deutschland

eDirectory day

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

2004 - 2007

Bangalore, India

BLUG - Bangalore Linux Users Group (Developers' Network for Linux)

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.

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