

Surya Krishnakumar

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Profile summary

- Around 5 years of experience in programming using C on designing, implementing digital signal processing algorithms for wireless telecommunication system
- 1.5 years of experience as a technical lead responsible for providing technical support, task planning and managing task deliverable for a team of 5 members
- Certified ISQTB foundation level software tester with excellence
- Showcased presentation skills on 'QoS improvement in Wireless systems using Cross layer Design' at the gatherings of Inter-college conference held at National Institute of Technology, India.

Technical Skills

- Domain knowledge: Software engineering, Telecommunication, Database systems
- Programming languages: C, Python, Java, MATLAB, VHDL/Verilog
- Scripting: Bash, Perl
- Databases: SQL Server, MS Access
- Web technologies: HTML, jQuery
- IDE: Eclipse (Juno)
- Tools: SCILAB, Meld, GNOME (desktop environment)
- Operating systems: Windows, LINUX
- Version Control: Apache Subversion

Experience

Senior Engineer

Mar. 2015 - Mar. 2016

Mbit Wireless Pvt. Ltd., Chennai, India

- Led a team of 5 members which worked using C programming language on capturing the Telecommunication standard requirements, translating them into hardware feasible design, programming algorithms for telecommunication protocols and analyzing system performance in both in simulators and on target
- Managed the program of tasks like 3GPP feature development in LTE PHY C simulator, RTL/L1 design support, log analysis during external/field validation
- Governed the team status for every sprint and escalated the concerns in task delays by discussing about the team on weekly status meet with Senior lead
- Determined automation strategy for running simulations and recommended automation scripts for efficiency and time reduction wherever required
- Established task guidelines document for the team to have a disciplined approach
- Negotiated and coordinated with inter-dependant teams regarding timelines for the task deliverables

Development Engineer

Jul. 2011 - Mar. 2015

Mbit Wireless Pvt. Ltd., Chennai, India

- Worked on designing, implementing digital signal processing algorithm for LTE system in C programming language and performed unit testing
- Had ownership in Automatic Gain Control module algorithm and design, fixed point implementation
- Developed framework in LTE PHY C simulator for connected mode and supported the integrity of the system with test bench for verification on release 8 and 9 features
- Involved in data log analysis and trouble-shooting during validation phase
- Formulated test cases for LTE PHY SIM performance analysis, RTL verification and validation
- Developed scripts in Perl and Bash shell for task automation and analysis
- Pro-activeness in providing timely resolutions to address problems encountered during the validation of test cases/release features in in-house/external field

Education

Pondicherry University, Puducherry, India

Aug. 2007 - May 2011

Bachelors in Electronics and Communication Engineering

CGPA: 8.51/10

Research and Project

QoS improvement in Wireless systems using Cross Layer Design

The design proposed, exploits the error-correcting capability of ARQ protocol at the data link layer and adaptation ability of the Adaptive Modulation and Coding (AMC) scheme at the physical layer to optimize system performance. Transmission power is made adaptable based on AMC and queuing behavior is analyzed using embedded Markov chain and the spectral efficiency of the wireless system is improved.

Technology used: MATLAB

Trainings attended

- Completed 'Object Oriented Programming using C and C++' developed by IBM and conducted by St. Patrick Software Solutions Pvt. Ltd., Pondicherry, India
- Underwent training on 'Television Broadcasting' at Doordarshan Kendra, Puducherry, India

Achievements and activities

- Represented the school to interact with the former President of India, Dr.A.P.J.Abdul Kalam about the role of students in building secular nation
- Secured school First in Higher Secondary Board Examination
- Attended a workshop on 'Sequential Circuit Design and Vending Machine' conducted by School of Engineering, Pondicherry University

References

References available upon request