KARTHIK PONUDURAI

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Summary

Self-directed and motivated Software Engineer with expertise in all aspects of the software development life cycle, including requirements analysis, design, development and production support.

I am well-versed in creating test cases, as well as covering all test conditions and eliminating redundancy and duplications.

Skills

- Expert in MATLAB/Simulink
- dSPACE TargetLink Code Generation
- Python
- Java
- Software testing (MIL, SIL, V-ECU, HIL)
- Programme testing software
- Engineering standards
- Project management
- Software version control
- Software development lifecycle
- Database management software
- IBM Rational DOORS requirement creation and management
- IBM Rational DOORS DXL programming

Work History

Mechatronics Simulation Engineer　　　　　　　　　　　　　　　08/2017 to Current
ZF TRW – Solihull, United Kingdom

- Design and development of automated virtual validation test tool using MathWorks products.
- Part of the virtual validation & verification process development team working closely with ASPICE standard.

Lead Software & Test Engineer　　　　　　　　　　　　　　　05/2011 to 07/2017
Jaguar Land Rover – Warwickshire, United Kingdom

- Directed AUTOSAR software design and test developmentwhile remaining focused on client needs.
- Development and management of in-house test tools for Model-in-the-loop (MIL), Software-in-the-loop (SIL), dSAPCE Virtual ECU (V-ECU) and Hardware-in-the-loop (HIL) testing.
- Prepared detailed reports concerning project specifications and activities.
- Rapidly prototyped new capabilities to confirm feasibility.
- Consulted with engineering staff to evaluate interface between hardware and software.
- Worked closely with other team members to plan, design and develop robust solutions in a timely manner.
- Worked closely with Tier-1 software supplier.

Senior Software Engineer　　　　　　　　　　　　　　　04/2005 to 05/2011
Zeeko Ltd – Coalville, United Kingdom

- Developed MATLAB simulations of complex machine control system
- Wrote maintainable and extensible code in a team environment.
- Modified existing software to correct errors, upgrade interfaces and improve performance.
- Developed software application for automated testing and version control.
- Implemented designs, including experimentation and multiple iterations.
- Consulted regularly with customers on project status, proposals and technical issues.

Education

MPhill (Electronics & Computing) : Electronics & Computing　　　　　　　2005
Brunel University - Uxbridge, United Kingdom
Dissertation:
Joint Interpolated Motion/Disparity Estimation Using Evolutionary Strategy for Stereo Video Coding - A novel interpolation technique using Evolutionary Strategy to reduce file compression ratio while maintaining stereo video quality.

BEng 2.1 Hons.: Digital Electronics & Artificial Intelligence (AI)　　　　　2003
University of Hertfordshire - Hatfield, United Kingdom

Dissertation:

VHDL Software Model - Analytical instruction sets for ADSP 21160 dual computation unit using VHDL programming language to perform Single Instruction Multiple Data (SIMD) operation.

Certifications

University of Warwick - JLR Technical Accreditation Scheme Certificate of Achievement

- Advanced Test Techniques for Electrical Systems and Software
- Robust Automotive Software
- Automotive Diagnostics

MathWorks - MATLAB/Simulink

- Embedded Coder for Production Code Generation
- MATLAB Object Oriented Programming
- Advanced MATLAB Application Development

ISTQB Certified Tester Foundation Level

Accomplishments

Received Jaguar Land Rover 2013 Technical Excellence Award for the development of automated software analysis and report generation tool.

Technical Publication

- K. Ponudurai, W.A.C. Fernando, K.K. Loo, Brunel University, UK, 'Joint Motion and Disparity Estimation in Stereo Video Sequences using Evolutionary Strategy' 1st Regional Conference on ICT and E-Paradigms, 24th June, 2004. http://www.ent.mrt.ac.lk/ictconf/participant.htm
- K. Ponudurai, W.A.C. Fernando, K.K. Loo, Brunel University, UK, 'Joint Motion/Disparity and Vector Refinement Technique using Evolutionary Strategy for Stereo Video Compression', WPMC, 5th September, 2005. http://www.iws2005.org/objekter/p10_wednesday_programme.pdf

Additional information

Languages:

- English - Fluent
- Malay - Fluent
- Tamil - Spoken only

Hobbies and Interests:
Badminton, football, guitar, website development, animal kingdom.