Raghavendra Kamma

Senior Test Engineer at Bosch | Connectivity & Interoperability Testing | Infotainment|Automotive & Consumer Electronics

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Summary

ISTQB & CMAP Certified Embedded System Professional with excellent skills in Connectivity, Interoperability & System Testing of Product as per Customer & Certification Body requirements

Proficient Knowledge in Testing of
• Bluetooth Classic - HFP, PBAP, A2DP, AVRCP, MAP, PAN, HSP
• Bluetooth Low Energy (BLE) - BLP, CSCP, CPP, HRP, LNP, FMP
• Wi-Fi Testing (STA & AP) - IEEE 802.11 a/b/g/n/ac

• Proficient knowledge in finding root cause by analysing Bluetooth (HCI & Airlogs) and Wi-Fi logs at system level

• Development of Automated Test Scripts using Python scripting, ADB Interface (Android Smartphones)

• Testing SmartPhone Integration (SPI) Technologies - Android Auto, Apple CarPlay, MirrorLink, mySPIN, Nissan Connect, iAPPS

• Testing Mobile Applications (Android & iOS), Navigation, Certification Tests, Drive Tests, Tuner(AM/FM, RDS, DAB, TMC), Voice Recognition, USB

• Analysing and Understanding Customer Requirements, Functional Test Plan Development and Verification

• Close analysis & test case preparation/business rule modifications

• Performing Peer reviews of Test plans and Test scripts

Tools:
• Frontline Bluetooth Protocol Analyzer/Bluetooth sniffers: Sodera, ComProbe BPA 500/600, FTS4BT
• Frontline Wi-Fi Protocol Analyzer/Sniffer: ComProbe 802.11 a/ b/ g /n
• Vector CANoe/CANalyzer, MATLAB / Simulink, JAMBIT, Beagle USB 480 Protocol Analyzer, Apple Accessory Test System (ATS), Wireshark, JIRA, DOORS

• Software testing with good exposure in testing Consumer Electronics, Infotainment systems

• New Project technical proposals, Proof Of Concepts, Market Research

• Defect Reporting, Analysis, Verification, & Tracking

• Connectivity Testing, InterOperability Testing (IOP/IOT), System Testing, Regression Testing, Functional Testing, Feature Testing, Smoke Testing, Sanity Testing, Test Strategy Preparations, Test Case Design, Test Case Development & Execution of test cases, Effort Estimation

• Ability to work in globally distributed work environment

Experience

Senior Software Engineer at   Bosch
October 2016 - Present (6 months)

Senior Software Engineer at   Robert Bosch (Australia) Pty. Ltd.
January 2017 - February 2017 (2 months)

Associate Software Engineer at   Bosch
June 2014 - September 2016 (2 years 4 months)

Software Engineering Intern at   Bosch
January 2014 - May 2014 (5 months)

Student Intern at   Bharat Sanchar Nigam Limited
June 2013 - July 2013 (2 months)

Projects

Robust Control of Robot Manipulator using Uncertainty and Disturbance Estimation
January 2014 to April 2014
Members:Raghavendra Kamma, shravan chitragar

In this project, The Uncertainty and Disturbance Estimation (UDE) technique is studied and attempts are made to contribute in its evolution, both theoretically as well as from application point of view. The significant feature of the proposed approach is that it does not need any information about the uncertainties and/or the disturbance; such as their magnitude or bounds. Also the design neither requires accurate plant model nor system states for its implementation.

The primary idea behind this technique is to 'Estimate' the uncertainty and disturbance, in an integrated manner, then cancel their effects. The estimation is done dynamically and compensated. Most of the other

famous robust control strategy such as 'Sliding mode control' require the upper and lower bounds of the uncertainty / disturbance.

Feedback Linearization (FL) is studied and used to linearize the non linear terms. The one advantage offered by the FL approach is that it provides the systematic framework for designing controllers for non linear systems.

To demonstrate the efficacy of the UDE based designs proposed in this work, applications to various mathematical models of Robot Manipulators are presented. A design of UDE based robust control of robot manipulator is studied to understand and validate the effectiveness of the controller in presence of Uncertainties and external disturbance. Design, simulation and performance of the proposed UDE based controller structure as applied for trajectory tracking control of rigid link, Two-Link and Mobile robot manipulator is presented.

Bluetooth Test Automation

January 2014 to May 2014

Members:Raghavendra Kamma

As an Intern at Bosch, I worked on Bluetooth Test Automation Framework. I was responsible for implementing the Automation Framework for Bluetooth Connectivity Testing between Android Smartphones and Car kit / Infotainment system.

ADB interfacing was used to automate actions on Android Smartphones and TTFis (Bosch's Proprietary tracing mechanism) interfacing was used to automate actions on Car kit / Infotainment system.

Automated areas include Functional, GUI, HMI, Power, Audio etc

Automation Framework was implemented using Python scripting.

Skills & Expertise

Embedded Systems
Microcontrollers
Embedded C
Electronics
Verilog
C
Programming
VHDL
Amateur Photographer
Python
Bluetooth
WiFi
MirrorLink

CarPlay
Wireless
Testing
Telecommunications
Test Automation
Robotics
Automation
Microprocessors
System Testing
Automotive
Matlab
Microsoft Office
Android
Simulink
Microsoft PowerPoint
C++

Languages

English	(Full professional proficiency)
Hindi	(Full professional proficiency)
Telugu	(Full professional proficiency)
Kannada	(Full professional proficiency)
German	(Limited working proficiency)

Education

PES University

Bachelor of Engineering, Electronics & Communication Engineering, 2010 - 2014

Certifications

ISTQB Foundation Level

ISTQB - International Software Testing Qualifications Board   License ITB-CTFL - 0068881   November 2014

CMAP - Certified Mobile Application Testing - Foundation Level

iSQI GmbH   License CMAPFL - 150051   November 2015

GOETHE-ZERTIFIKAT A2 START DEUTSCH 2

Goethe-Institut e.V.   License 01160-A2-04470-16   August 2016

IELTS - International English Language Testing System

British Council   License 16IN182721KAMR001A

Interests

Travelling, Running, Cycling, Trekking, Volleyball, Table Tennis, Badminton, Movies, Music

Honors and Awards

University & District Topper in Engineering Entrance Examination with Rank 51

Common Entrance Examination Board, Karnataka

April 2011

Top Evaluator in "InnoTrip"

Robert Bosch GmbH, Germany

July 2016

  InnoTrip is an Innovation contest across Car Multimedia Business Unit of Bosch

Distinction Award

PES Institute of Technology, Visvesvaraya Technological University, Belgaum

May 2014

  Received Distinction Award for my performance in Bachelor of Engineering Degree

Distinction Award

Board of Technical Examinations, Bengaluru

May 2011

  Received Distinction Award for my performance in Diploma in Engineering Degree

Organizations

Devasiri Charitable Trust, Gangavathi

Organiser and Fundraiser

April 2011 to Present

  Educational Scholarship for students who are from poor economical background

Prerana, Bengaluru

Organiser and Fundraiser

April 2011 to Present

  Educational Scholarship for students who are from poor economical background

Kammavari Sangham, Bengaluru

Organiser and Fundraiser

May 2011 to Present

  Educational Scholarship for students who are from poor economical background

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Linked in

Contact Raghavendra on LinkedIn