


Venkatesh Gokulraju

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Accomplished hands-on, quality-driven, detail-oriented **Lead Software Engineer** and **Systems Architect** with **Product Management** focus with a proven track record towards delivering cutting-edge products.

Technical Skills

- C,C++,Python,Go,Bashscript
- Frontend-Wireframes, HTML5,CSS3,JavaScript, jQuery,React.js
- ServerSide-Micro Services, RESTfulWebservices,gRPC, Lighttpd
- DB-MongoDB,PostgresSQL; PgAdmin,Redis
- Middleware-Apache Kafka,Fluentd
- Frameworks-Flask,Django,
- Java Spring MVC(Multithread Handling, Connection Pool),PySpark
- ML-TensorFlowLite,MLlib
- Cloud-AWS(PaaS, SaaS, and orchestration)/ AWS IoT Greengrass / AWS Sagemaker
- Embedded Linux,OpenWRT,FreeRTOS
- Firmware,BSP,Kernel,Devicedrivers,SBC
- Software Tools-GDB,Dmalloc,Valgrind, Coverity,GCov,PyLint,PyTest,Pydb
- Hardware Tools-Trace32/JTAG,PicoScope,DSO, Spectrum Analyzer
- Network Debug Tools-Wireshark,Omnipeek, Aircrackng,Airodumpng,TCPDUMP,TRex/IXIXA/Spirant traffic generators,IPREF3,HAMMER CallMaster.
- Network Protocols-WiFi(IEEE802.11ac),WPA2,WPA3, EAP-TLS/Ethernet(IEEE802.3),PoE/Layer2 and Layer3(Switching,Forwarding,QoS,Routing)/PPP,PPPoE/TCPIP Protocol Suite(IPv4/v6,UDP/TCP, HTTPs,VLAN,DNS,DHCP, ARP, NAT)/Security standard (TLS/SSL,AAA/RADIUS)/SIP/ WebRTC/CWMP Protocol TR069/BLE5.2;BLEMESH/Zigbee/ LoRaWAN/NB-IoT/4G LTE/MQTT,Mosquito,RabbitMQ,Modbus.
- DevOps-Jenkins CI/CD,Docker, Kubernetes,GitHub,Bitbucket
- Embedded Android,DeviceTree,HAL;Framework Layers, Headless Android soft sensor(Foreground, Background services),Enterprise network analyzer (Android Agent) app.
- Build,Train,Test and Deploy ML model from scratch

Product Management Skills

- RFP to Techno-Commercial Proposals
- Product Launch(DEMO-Stalls)
- Go-to-Market Strategy
- Proof of Concepts/Minimal Viable Product
- Market Intelligence, Competitors product analysis
- Product Life Cycle Management
- Product Positioning
- Pre-Patenting Claims
- Innovate, Facilitate and Convince clients through product workshops
- Key ideas generation and translate them into products
- Articulate Design Ideas/Concepts - Mockup UI/UX Prototype workflows
- Customer Segmentation/Consumer Campaigns
- Managing Distributed Teams

- New Business Models
 - Define product roadmap and milestones for the company
 - Lead new initiatives with limited resources and support
 - Roll-out detailed Software Functional Specifications and Technical Requirement documentation
 - List down detailed user-stories for iterative development of features /feature-enhancements
 - Project Planning, Resource mapping, Work breakdown and allocation, Agile Jira Scrum boards, Waterfall models.
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Experience

05/2015 – PRESENT

Senior Software Engineer / Cisco Systems Inc,(Wireless Network Infrastructure Business Unit) / Richardson, Texas

Envisage, Propose technical feasibility and refine requirements to Product managers/Stake-holders and drive System-level design, software architecture and code to meet/exceed Product Specs/KPIS and Quality metrics.

Scoping, design and end to end implementation of features on Cisco Digital Network Architecture(Cisco DNA),WiFi Access Points,Aironet Active Sensor - Wireless Backhaul, Wireless Service Assurance,IPSLA(IP Service Level Agreement),802.1x support on WIFI Active Sensor, Office Extended Access Point,WebAuth,WebRTC,ActiveScan,PNP,Zero-Touch Provisioning state machines,openWRT Data Path click elements(Open source Modular Router) implementation.

05/2013 – 04/2015

Individual Contributor, Systems Architect & Product Manager / SamCys Technologies Pvt Ltd (Clients:- ST Microelectronics,SportsMechanics) / Chennai, India

Design and develop wireless body area network sports IOT gateway (sensor clustered OMLED wearable bands relay players vitals to centralized sports gateway which interconnects Performance analysts and Fans). Own the short-term roadmap for MVPs and quarterly releases.

5/2013 – 04/2015

Individual Contributor, Systems Architect & Product Manager / Cornet Technologies (Client:- Centre for Artificial Intelligence and Robotics) / Chennai, India

Interact with Defense and Space Research Scientists and come-up with requirements capture followed by technical feasibility analysis, float proposals and be the single point of contact till letter of intent has been approved by the clients.

Proof of concepts feasibility validation and its integration with the product architecture Customize and port Open source Quagga as a routing software suite on to protoboards brought-in feature support and enhanced it with control knobs.

BSP development, Fast-path implementation,CLI framework/Embedded webserver, Customized Open Source Software modules integration onto Protoboards(LAN-CEF-WAN).Derive product acceptance test

plan and get customer approved, share bench-marked deliverables. Ramp up, manage and drive the team of 10+ members on a daily-basis by introducing Scrum towards deliverables.

06/2010 – 11/2011

Senior Technical Leader / Aricent Technologies (Clients- Juniper Networks, Japanese Radio Corp, DellForce10 Networks) / Chennai, India

Responsible for the design and implementation of network products platform and protocol features. Rolled-out detailed SW development plan and owned its execution, plan/review architectures, technical designs, test strategies, test cases. U-Boot(Boot model finalization), BIOS Programming, Board bring-up, Diagnostics Firmware, Device driver Implementations. Designed and implemented Built In Self-Test diagnostic framework. Broadcom BCM56845 trident driver development, Porting BCM SDK and its underlying MAC configurations into FTOS.

09/2004 – 05/2010

Individual Contributor & Technical Leader / ALCATEL LUCENT (Product lines-CSBU,NIBU,FTTU) / Chennai-India ; Strasbourg-France ; Raleigh-USA.

DECT-Callhandling, Mobility-management, Handover modules associated features implementation. SIP Stack/SIP server multi-codec implementation on Omni(IP-PCX).Q-Driver/Q-Dispatcher development for Ethernet Omni Series , ASIC drivers enhancement. Chassis supervision features implementation , Platform Infrastructure - ISSU , HA modules enhancement. Broadcom BCM5695 Layer2 NP implementation for Line Cards. Feature implementations on GPON(7342),Ability to ping from ONT,Background FastMIB upload. Verizon,at&t marketing team asks were taken-up as POC and successfully demonstrated (implemented embedded inline OTDR feature GPON OAM) which pinpointed the exact fiber outage point and its root cause.

06/2010 – 11/2011

Senior Software Engineer / HTC Global Services (Embedded Systems Division) / Chennai, India

Proof of Concept implementation, prototyping and beta-testing of Universal RFID reader. Developed firmware for memory and power constrained controller based Application Specific Target Boards, Active and passive sensors interfacing. Conversion of the field evaluated concept in to reference design. Develop firmware for the active dual frequency RFID tags with locator and call the tag option. Simulate, Evaluate and implement Anti-Collision protocol State Machine for reader

12/2000 – 07/2003

Software Engineer / Infinite Computer Solutions (Lucent Offshore Development Center) / Chennai, India

Translator 3A SMSI Board - Box which converts Lucent 5ESS format in to 1ESS format and integrated through Intelligent Network SS7.CPLD and FPGA Logic Design development, Board Support Package customization, Firmware and Device Driver development,Blackbox,Whitebox and Regression testing suites. Embedded Stack Development for ISDN – L2 Link (Data Link Layer) using Q.921 Protocol Implemented using VxWorks over C . Implemented boot and miniBoot modules.Z85C30 Serial

Communication Device Driver development for Diagnostic Port. Developed Automated Test platform (Emulator) for Translators which will generate SMSI / AUDIX / BICLID Messages like Lucent 5ESS – Switch.

Education

Bachelor of Engineering / St. Peter's College of Engineering, University of Madras / Oct 2000

Field of study – Electrical, Electronics and Communications Engineering

Awards

Connected Recognition Award @ Cisco , USA / Mar 2019 / *Wireless Service Assurance* – “Driving features from a vague PRD to a clear working solution achieving DTHO, created WoW factor from client”

Bug-a-Thon Drive @ Cisco Systems , USA / Oct 2018 / *Cisco Product Management Office, Wireless Networking Business Unit Director* – “Got this award for fixing critical gating issues during Bug-a-thon drive and reduced the overall backlog which enabled the release to get on time and received appreciation from the customer facing product management office which led to the signing-up the deal with critical customers (Airbus/Bank of Canada/Walmart) in October 2018.”

Cisco Engineering Hack-a-Thon @ Richardson, USA / Mar 2018

Secure BLE Serial console - Replace traditional way of accessing network devices using RS232 cables, Solve the pain points of client site debugging first responders(Eliminate high raised ceiling climbing risks,SAN farms).Easing the job of accessing the Cisco 802.11ac(Wave2) AP's mounted in non-friendly access areas. Enable the technology on non-BLE cisco hardware devices also without any hardware changes, with minimal software changes.

Cisco Engineering Hack-a-Thon @ Richardson, USA / Mar 2017

Edge Compute - Active participation in North America ENG Hackathon 2017 , 2-days event and successfully showcased real-time streaming of active vitals of an AP(1850 series) with an embedded machine-learning built inside an AP which kicks in debugs and RCA the issue - This addressed the pain-points of enterprise Wireless LAN challenge.

Innovation honors @ Alcatel Lucent Technical Academy, INDIA / Sep 2007

Proof of concepts showcased to ALTA catering the needs of enterprise business units

Snail-mail notification system and its integration with Alcatel IP handsets/Set-top box notification system | Embedded inline OTDR with GIS pin-out (GPON - OAM) | RFID integrated telemetry | On board flash utilization, Chassis intrusion detection, Network Health Monitoring System.

Patents

- US Pat 10581972 Internet of things (IoT) gateway-based carrier-operator signage monitoring
- US Pat 62/872,683 WiFi Network Monitoring Sensor and Network Early Warning Platform