700, Health Sciences Drive, Mail box- 495

Mobile: +1 631-590-0596

E-Mail:avinash.kumar@stonybrook.edu

### **Current Academic Status**

- Graduate Student (MS in Computer Science), Fall 2017 at State University of New York at Stony Brook.
- Tentative Graduation Date Dec. 2018

### **Employment**

## Senior Software Engineer Sandvine Technologies, Bangalore, India

Apr 2017 - Aug 2017

- Added Components to Sandvine's SDE platform to enable Diameter based S9 interface to facilitate communication between two PCRF nodes.
- Improved the quality of existing software by resolving many legacy issues.

## **Software Engineer**

## Cisco Systems, Bangalore, India

Mar 2013 - Apr2017

- Added Geographical Redundancy component at MME to enable 100% availability of the node even during complete chassis failure.
- Enhanced MME node to support MME-EMBMS functionalities by adding Sm and M3 interfaces.
- Enhanced CSFB (circuit switch fall back) component to seamlessly support Ultra Cards on 4G devices with SMSonly capability.
- Implemented a feature for heuristic paging of 4G devices which fine-tuned and reduced redundant signalling in the network.
- Improved quality of the MME node by fixing many complex and critical bugs raised by QA Team and customers.

#### Software Engineer

### Ingersoll Rand, Bangalore, India

Aug 2011 -Mar 2013

- Designed and developed BACnetscan app to capture data and alarms from remote BACnet Control unit and send it over XMPP to remote server and a web based configuration app for Connectivity Module.
- Designed and developed apps to capture, store, and process data packets on ZigBee Data Logger.
- Designed and developed Access Control App to control Access and Time and Attendance and a Point Manager App to manage scheduled switching of electrical devices connected through relay switches to GPIOs on SCCC (Small Commercial Converged Controller).
- Designed and developed a package of applications for Linux boxes to handle automatic start-up of all apps, critical process monitoring, process failure handling and failure email notifications.

## **Software Engineer**

# IBM India Pvt Ltd., Bangalore, India

Jun 2009 – Mar 2011

- Designed and developed enhancements on BMP (Business Management Platform) to validate the fields of Incident Tickets and to support IPV6 address field in Incident Tickets and update the database accordingly
- Managed multiple change-requests from customers to ensure timely and co-ordinated delivery of software updates.
- Monitored Server Farms' health and provided first level support.

Skillset

Programming Languages

Development IDE and tools

C, C++, Python, Bash

**Operating Systems** 

Linux, StarOS, UNIX, Windows

Other Skills

4G LTE EPC, Agile Methodology, Data Structures, Algorithms, Operating Systems,

XMPP, Device Drivers, HTML, XML, CSS SQL, SQLite, BACnet, MODBUS. Eclipse, vi, Make, gcc, gdb, valgrind, efence, git, bitkeeper, Wireshark, cscope

# **Academics**

- PG Diploma in System Software Development, CDAC-ACTS, Bangalore, 74%, August 2011
- B.E. in Electronics and Communications, Anna University, Chennai, 82%, May 2008
- I.Sc., Science College, B.I.E.C, Patna, 70%, May 2002
- Matriculation, Patna Central School, C.B.S.E, 92 %, June 2000

### **Other Technical Experience:**

- Developed a basic loopback network driver on Linux as academic project at CDAC-ACTS.
- Developed a Microcontroller system to detect the alcohol consumption by driver and control the vehicle ignition and a Library Management System in C language with CLI during Bachelor of Engineering.

### **Awards and Achievements**

- Team Excellence Award for stable and high quality release of StarOS at Cisco.
- Star Award for developing ZigBee Datalogger and President Award for innovation at Ingersoll Rand.
- Merit-listed by CBSE for AISSE (All India Secondary School Examination)-2000.

### **Personal Information**

Date of Birth : 31th December 1985 Nationality / Passport Number : Indian / H0884799