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Visvesvaraya Technological University, PES Institute of Technology, Bangalore
Bachelor of Engineering, Computer Science **2002 – 2006**

Languages: C(experienced), Python(proficient), C++(prior experience), Haskell(hobby)
Tools: GDB, Vim, Emacs
Github Profile: www.github.com/niranjn-nagaraju

13+ years of design and development experience in System Programming, Security, and TCP/IP Networking.

10Cosine Tech Solutions Pvt Ltd, IoT startup, Bangalore
Technology Consultant **October 2018 – Present**

- Assisted with designing and optimizing Micropython-based firmware for an IoT-enabled smart-plug.
- Designed a discovery mechanism for the WiFi-enabled IoT device inside a local-network.

December 2017 – August 2018

- Worked towards integrating OPSWAT host-checker with the linux desktop client.

October 2012 – November 2017

- Switched IPS' security database backend from Berkeley-DB to SQLite3.
- Integrated Intel's pattern matching engine, 'Hyperscan' into SRX-IPS.
- Ported IPS and SSL forward-proxy modules to Intel/Linux-based next-gen SRX devices.

October 2010 – October 2012

- Worked on extending AxM Web Agents to support Email-based RSA Adaptive Authentication, and Intersite Single Sign-On (ISSO) features.

Narus Networks, Bangalore
Software Engineer

June 2008 – March 2010

Multi-threading processing layer, ‘Logicserver’, for NarusInsight

- Worked on the development of an actor-based concurrent programming language for a redesigned NarusInsight’s processing layer, ‘Logicserver’.
- Profiling and performance tuning (using Oprofile and Valgrind) of the redesigned Logicserver component.

SQL Loader, NarusInsight

- Developed a NarusInsight component to load capture layer metadata into an SQL database using unixODBC library.

CoreEl Technologies, Bangalore
Design Engineer

July 2006 – June 2008

TOE (TCP/IPv4/IPv6 Offload Engine)

- Implemented a virtual network device driver for a PCI-e based FPGA device emulating TCP/IP stack in hardware.
- Designed and developed a dual network-stack architecture that enables switching between TOE and the Linux TCP/IP stack.
- Implemented ICMPv6 NDP (Neighbor Discovery Protocol) and MLD (Multicast Listener Discovery) protocols in software to be integrated with the IPv6 stack in the FPGA.

PERSONAL
PROJECTS

Notifications Center for Android

2019

Developed ‘Notifications Center’ - an Android app that organizes incoming notifications, and declutters the status bar.

AWARDS AND
RECOGNITIONS

Juniper Networks

April 2016

Received a ‘Department Spotlight Award’ at Juniper Networks for resolving IPS accuracy issues reported during NSS Labs’ Data-center tests on Juniper’s SRX NGFW, in a very narrow time-frame.

Juniper Networks

May 2015

Our team (of three people) won 4th place at a BU-level ‘Innovation Day’ contest for our idea titled, ‘Vulnerability Correlation for IPS’.

The idea was to use the online CVE(Common Vulnerabilities and Exposures) database combined with network information (machines, services running, et al.) to improve SRX-IPS attack detection.

REFERENCES

Available upon request.