Srikanth Manikarnike

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Education

University of Utah — *Master of Science – Computer Science*
Salt Lake City, Utah
- GPA: 3.8 on 4.0

R. V. College of Engineering — *Bachelor of Science – Computer Science*
Bangalore, India
- GPA: 71.2 on 100.0

Summary

- 5 years of work experience as a networks and systems programmer
- Expertise in C, linux kernel programming, OOP methodologies
- Knowledge of IPSec, Layer 2/Layer 3 protocols, FreeBSD

Work Experience

Flux Research Group, University of Utah — **August 2012 – present**
Research Assistant — Salt Lake City, Utah
- Worked on enhancing *dummynet* – FreeBSD's traffic shaping kernel module by adding mathematical models to its delay episodes and loss events.
- Created predictable and repeatable environment on testbed nodes to produce required QoS on emulated links.
- Added tuning features for links/nodes to mimic latencies and bandwidths of that of the real world (based on geographical location).

MindTree Ltd. — **October 2007 – July 2010**
Senior Software Engineer — Bangalore, India
- Implemented microcode loader for IPSec Application Gateway for Intel's IXP 2850 Network processor.
- Wrote debug support for micro-engine driver issues reported on XScale Core Components.
- Implemented debug support feature to fetch and write to DRAM and Scratch Pad memory using the micro-engine driver.
- Developed and maintained the Captive Portal module for their access point and wireless switch with web, SNMP and command line interfaces.

Software Engineer
- Provided debug functionality to Access Control List and Traffic Management module on Cavium Datapath.
- Created a validation test setup for unit, system and regression tests.

Skills

Languages: C, C++, MicroC, Racket
Operating systems: Unix, Linux, VX Works, Windows
Tools: gdb, iperf, isic, IXA SDK 4.2, , IXWlan, IXIA, git
Scripts: python, perl, shell

Additional Projects

Ramdisk Implementation [src] — C/Linux
Implemented a secondary storage disk device on primary memory, supporting synchronized random-access reads and writes.

Primality Testing [src] — C++/Linux
We implemented an efficient primality tester using AKS and Miller-Rabin Primality Testing algorithms.

Dynamic Binary Translation [src] — C++, CUDA/Linux
A solution to accelerate dynamic binary translation for fixed size instructions using CUDA.

Compiler for Python [src] — Racket/Linux
Wrote a source-to-source compiler to translate Python to C using Racket.

Player & AI for Triple Town [src] — Racket/Mac OS
Wrote a playable version and an AI for Android game in Racket.