Jitesh H Shah

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OBJECTIVE

A position as an entry-level Software Engineer

EDUCATION

- **North Carolina State University**, Raleigh, US — Aug 2010 - Present
  MS in Computer Science. Expected Graduation: June 2012. GPA: 4.00/4.00
- **Pune Institute of Computer Technology**, Pune, India — Aug 2004 - Jun 2008
  Bachelor of Engineering, Computer Engineering. CGPA: 3.97/4.00

RELEVANT COURSES

Operating Systems (A+), Design and Analysis of Algorithms (A+), Fundamentals of Parallel Computer Architecture (A), Cloud Computing (A), Internet Protocols (A+), Embedded Systems (A+), Network Security (A)

COMPUTER SKILLS

Skillset: Linux kernel programming, System programming, Cloud Computing, Embedded development
Launguages: C, C++, GCC inline assembly (used for ARMv7), Python, Shell scripting, Java
Tools: Git, Make, gdb, strace, valgrind, gprof/gcov, oprofile, cscope/ctags, Eclipse
OS: Linux (RedHat and Debian based distributions), Windows

WORK EXPERIENCE

- **North Carolina State University**, Raleigh, US — Jan 2011 - Present
  Graduate Research Assistant, Cyber Defense Laboratory
  - Working on an in-house implementation of the TrustZone architecture on an i.MX53 development board from FreeScale (Cortex-A8 processor)
  - Ported an Offline VM patching tool to RPM-based distributions
- **NVIDIA**, Beaverton, US — May 2011 - Aug 2011
  Hardware Intern, Mobile BU
  - glibc functions optimization for an ARMv7-based Tegra processor
- **Marvell Semiconductors Pvt. Ltd.**, Pune, India — Jul 2008 - Jul 2010
  Software Engineer, Wireless R&D
  - Maintainer of the Fedora-ARM project — Jan 2009 - Dec 2009
  Bootstrapped Fedora for the ARM architecture. Built around 90% of the RPM repository. Released three versions: Fedora 10, 11 and 12
  - Designed and implemented a flash-based configuration manager, a low-footprint HTTP server and an SSDP module for an ARMv5-based wireless microcontroller (ThreadX Operating System)
  - Wrote drivers for the on-board crypto engine of an ARMv5 microcontroller

PROJECTS

- **Provenance Management for VCL-based cloud** — Jan 2011 - Apr 2011
  Implemented secure and stealthy monitors on VM instances (CentOS) in the NCSU's VCL (Virtual Computing Lab) environment for resource usage and anomalous events (by scouring security logs). Programmed in Python
- **User-level thread library similar to pthread** — Jan 2011 - April 2011
  Implemented a user-level thread library, with scheduler & mutex support, and API same as the pthread library
- **Network-assisted TCP congestion control module** — Sep 2010 - Nov 2010
  Designed a new TCP congestion control module with assistance from the network. Implemented it on the Linux kernel. Compared with TCP CUBIC and RENO
- **Re-design of UBI metadata for faster mount times** — Jun 2009 - Mar 2010
  Mentored a senior year project aimed at improving mount times of huge flash devices that use UBI at the block layer. Got a speed-up of about 2x with the new design. Implemented inside the Linux kernel
- **Optimizing Network data paths in a virtual network** — Jun 2007 - Mar 2008
  Optimized TCP communication among guest VMs running on the same physical machine by sharing memory pages between the guest VMs. Achieved a speed-up of about 3x. Implemented over the coLinux hypervisor

HONORS

- University topper in the University of Pune, 2005-06
- Highest score in Engineering Mathematics, University of Pune, 2004-05