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OBJECTIVE

Seeking a challenging **internship** position in software design and development in the Networking/Security domain.

SUMMARY

- Strong academic preparation in Computer Science; focus on **Networking, Security & Operating Systems**.
- **Three years of relevant industry experience**; excellent **problem-solving abilities** and **communication skills**.

EDUCATION

The University of Texas at Austin **May 2009**
Master's (Computer Science)
Coursework: **Advanced Operating Systems, Wireless Networking, Distributed Computing**
GPA: **4.0** (till date)

Pune Institute of Computer Technology, University of Pune, India **May 2004**
Bachelor of Engineering (Computer Science)
GPA: **3.68**

TECHNICAL SKILLS

Operating Systems : Linux (2.4 and 2.6 kernels), Windows 2000, Windows XP, TinyOS
Languages : C, C++, Java, Bash shell scripting, SQL, x86 assembly, HTML, NesC
Tools : gcc, Make, gdb, CVS, SVN, Ethereal, RADIUS server, HostAP, Valgrind
Databases : Postgres, MySQL

PROFESSIONAL EXPERIENCE

University of Texas at Austin, Texas Advanced Computing Center **January 2008 – To Date**
Research Assistant

- Working on the TeraGrid project which integrates high-performance computers, data resources and tools, and high-end experimental facilities around the country.

Airtight Networks Inc., Pune, India **July 2004 – July 2007**
Team Lead, Engineering

- **Feature conception, design and development** for **Wireless Network Security** products.
- Designed and developed various **Wireless Intrusion Prevention techniques** and the layered **SpectraTalkTM** protocol between SpectraGuard® server and sensor.
- **Independently** designed and developed **Access Point Wired-Side connectivity** and **Access Point Type** detection techniques. Also developed **Access Point classification (Intrusion Detection)** logic.
- Acquired expertise in **Network programming and POSIX Threads**, and also in protocols including **IEEE 802.11 WiFi, Ethernet, IP, TCP and UDP**.

“QuickSilver – An Active Memory Defragmenter”

- Designed and implemented a prototype of an **in-kernel RAM defragmenter** aimed at **improving the efficiency** of the **Memory Management module** in the **Linux kernel**.
- Designed and implemented critical modules such as the **Movable Page Identification Module** and the **Page Clustering and Remapping Module**.
- Development with **C** in the (then) **latest Linux 2.6.0 kernel**.

ACADEMIC PROJECTS

Graduate Course Projects

“JouleSaver: Cache-driven Disk Drive Power Throttling”

- Introduced a mechanism in the Linux operating system to **reduce the power consumption of laptops** by unifying the often conflicting goals of **powering off the hard drive** and **guaranteeing data consistency**.
- Designed and implemented the **File Access Logger** and the **Perfect Prefetcher** modules. Also designed the **Crash Recovery Module**.

“SABER: Secure Beacon Vector Routing”

- Identified the types of attacks possible on the “Beacon Vector Routing” algorithm for **wireless sensor networks** and theoretically evaluated their impact on routing.
- Designed and implemented a **one-way hash chain** based approach for circumventing the **virtual co-ordinate deflation attack**.

Undergraduate Course Project

“Low Latency Internet Chat Server”

- **Conceived, designed and implemented a client-server chat system**.
- Designed and implemented the **client authentication mechanism, client-server protocol, flow control**, and a sample client prototype in **C** on **Linux**.
- Learnt basic **network (socket) programming, security and cryptography** concepts.

SEMINARS & PRESENTATIONS

Seminar on “Linux Kernel Memory Allocation Schemes” in senior yr.

- Suggested **improvements** in the **Linux kernel memory management module**.
- Developed a **prototype kernel module** to demonstrate the various **kernel memory allocation algorithms**.

AWARDS, ACHIEVEMENTS & ACTIVITIES

- **“QuickSilver – An Active Memory Defragmenter”** won the following prizes,
 - **First Prize** in **Impetus 2004** (Systems Category)
 - Technology Research Lab's special **“Award for excellence in Systems Software”** in **Concepts 2004**
 - **Ranked fourth** at **IIT Bombay Techfest 2004** (Open Software Category)
- **AirTight Excellence Award** 2006-2007 for outstanding performance.
- **Student Member of IEEE** from 2001 through 2004