

Objective

To find a creative and challenging summer internship to further my electrical engineering skills in radar signal processing, or high performance networks.

Education

Worcester Polytechnic Institute

Expected MS in 2003: Electrical & Computer Engineering EE
Thesis: Analyzing performance of TCP and STP implementations over GPA: 4.00
SATCOM links, and developing Performance Enhancing Proxy techniques

Worcester Polytechnic Institute

BS in Electrical Engineering with a minor in Computer Science EE/cs
Studied cryptology, computer engineering, IC design, RF communication GPA: 3.66
Project: Designed a system of tunable laser diodes for monitoring hemodialysis.

Texas Academy of Mathematics and Science

2yr early college admissions program at the University of North Texas Aug 1995 – May 1997
Independent study: Ray casting engines and network protocols for high Honors Graduate
performance computer games with the Laboratory for Recreational Computing.

Computer Experience

Programming

Assembly (Intel x86 – DOS, Linux), C/C++, Cobol, Fortran, Java, Logo, Pascal, Visual Basic, CGI, (X)HTML, awk/csh/perl/sh, MS Access, MS Windows API, Oracle, TCP/UDP/file sockets, X Windows

Platforms

Linux/Unix/X, Macintosh, MS Windows, NetWare Server, and proprietary systems

Applications

Altera Max+Plus II, Apache-SSL, Bind DNS, Cadence, MathCad, Matlab, MS Office, Samba, Spice, Sendmail, Workview Office, Xilinx, Borland/Visual/Wacom C++, and others

Work Experience

Intel Corporation

May 2002-Aug 2002

Internship with the Intel Network Processor Architects in Hudson, MA.

Automated the generation and simulation of microcode sequences to find hardware bugs / race conditions in the Intel IXP2850 Network Processor cryptography units. Rewrote Advanced Encryption Standard (AES) key inversion C routines to run on processors of differing endianness. Took an already optimized MD5 microcode implementation, and boosted performance by over 25% through creative use of architectural constraints. Worked with another intern to lay foundation for a high-speed, multi-precision integer multiplier on the IXP2850 microengine. I received excellent performance reviews from my supervisor.

Worcester Polytechnic Institute

Electrical & Computer Engineering Dept. — Part time Assistant Sys-Admin Aug 2001-May 2002
Oriented the new systems administrator and filling in for emergencies & technical details.

Electrical & Computer Engineering Dept. — Computer Systems Administrator May 1999-Jul 2001
Hired & trained student employees, educated faculty/staff, and tutored students. Directed the full automation of: print accounting, lab computer imaging, and Unix/Windows/Kerberos/future password synchronization. Managed daily operations, optimized server resource allocation, maintained software & hardware inventories, and supported Digital Unix, HP-UX, Linux, Macintosh, MS Windows, Ultrix, and Solaris. Only full-time support staff & highly praised by faculty & students.

Electrical & Computer Engineering Dept. — Part time: Unix programmer Oct 1998-May 1999
 Developed a program to synchronize Unix & MS Windows (encrypted Samba) passwords, and answered general Unix & Windows support questions.

Campus Computing Center — Work study: Database programmer/help desk Aug 1997-Sep 1998
 Developed an MS Access database for inventory and order tracking, and provided general helpdesk support for Unix & MS Windows inquiries.

Custom Accessories, Inc. May 1998-Aug 1998
 Directed the installation and configuration of a Windows NT LAN, and trained employees.

Network Technologies Group Jan 1998-Aug 1998
 Wrote an Access database to track members and schedule conferences for the Northeast Modern Language Association.

Universal Computer Systems

Cobol Programmer May 1997-Aug 1997
 Wrote and performance tested database applications and proprietary operating system utilities.

Mainframe Operator Jun 1996-Aug 1996
 Monitored central computer room performance, processed job requests, and performed routine maintenance of CPUs, line printers, and tape systems.

Clubs, Honor Societies, & Affiliations

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|---|--------------|
| Amateur Radio Operator (AD5EY) | 2001-Present |
| Eta Kappa Nu — Electrical Engineering Honor Society | 2000-Present |
| President – Gamma Delta Chapter (WPI) | 2001-2002 |
| IEEE, WPI Student Branch | 2000-Present |
| Publicist | 2003-Present |
| Vice President - WPI Student Branch | 2000-2001 |
| Mensa | 2001-Present |
| Tau Beta Pi — Engineering Honor Society | 1999-Present |
| WPI Graduate Student Organization | |
| Vice President of Policy | 2003-Present |
| Secretary | 2001-2002 |
| WPI Indian Student Organization, VP of Information Technology | 2002-Present |
| WPI Wireless Association (W1YK) | 2001-Present |
| Station Engineer & Repeater Control Operator | 2003-Present |
| Vice President | 2002 |
| TAMS Amateur Radio Club (KC5OIH), VP of Activities | 1995- 1997 |
| Junior Engineering Technology Society — Engineering Club | 1995- 1997 |
| Mu Alpha Theta — Math Club | 1995- 1997 |
| Boy Scouts of America | youth- 1997 |

Special Interests

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| Public & private key cryptography | CMOS IC Design |
| Number theory & abstract algebra | Signals processing |
| Radio communications | Robotics |
| Assembly Programming | Early/accelerated educational programs & teaching |