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Daniel Wendlandt

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Objective: To gain research experience in the area of systems, networking & security.

Education:

9/01 – present **Stanford University**, Stanford, CA.

- Expected BS degree with Honors in Computer Science in 6/2005.
- Cumulative GPA: 3.88
- 2270 GRE (verbal = 670, math = 800, analytical writing = 800)
- CS Coursework :
  Security, Networking and Systems courses:
  Advanced Topics in Distributed Systems, Advanced Operating Systems, Computer & Network Security, Computer Networking, Cryptography, Operating Systems & Systems Programming, Internet Technologies, Computer Architecture, Compilers, Databases, Programming Languages, and Independent Research.
  Other relevant courses:
  Object-oriented System Design, Automata & Complexity Theory, Unix Consulting, Probability Theory, Electronics, Discrete Mathematics and core programming methodology & mathematics classes.

8/97 – 6/ 01 **Appleton North High School**, Appleton, WI.

4.0 GPA. 1600 SAT, 11 AP courses. Advanced math courses at Lawrence University.

Special Honors: 2004 Stanford Tau Beta Pi Engineering Honor Society
2003 Dept. of Homeland Security Scholar
2001 Presidential Scholar, National Merit Scholar, National AP Scholar

Technical Experience:

9/03 – present **High Performance Networking Research Group,** Computer Science Dept, Stanford, CA

- Currently working with Prof. Nick McKeown on a project to design, develop and integrate a user-space router into the Virtual Network System (VNS) project. The router's operation can be both visualized and modified through an intuitive graphical interface that allows users to learn about Internet infrastructure by seeing how the router's modular components handle real Internet packets.

6/04 – present **Information Operations Assurance Center**, Lawrence Livermore Nat'l Lab, Livermore, CA

- Initiated and led a research project on geographic properties of Internet routing. Performed substantial background research on Internet topology studies and then designed and implemented a research methodology and global network measurement infrastructure using PlanetLab and public looking-glass servers to collect Internet data.
- Built tools to analyze over 100,000 individual Internet paths using geolocation software. A paper analyzing the results is currently being prepared for submission with the help of a technical mentor.

11/03 – present **Stanford Cybersecurity Project,** Center for Int'l Security & Cooperation, Stanford, CA

- Designed and created a student-initiated Stanford course titled "US National Cybersecurity", sponsored by former US Secretary of Defense William Perry, to explore technical, economic, legal and policy aspects of Internet and critical infrastructure security. Along with two graduate students I develop course topics and reading, prepare and give lectures, invite expert guest-speakers, and lead in-class discussions.
- Initiated independent research into the role Internet Service Providers could play in securing the Internet infrastructure. The work focuses on analyzing the overall value of individual mechanisms and the economic incentives of the service providers to implement these new technologies, tactics, or policies.

5/04 – present **Stanford Networking Operations**, Stanford University, Stanford, CA

- Perform monitoring and maintenance tasks on Stanford's core networking infrastructure.
- Participate in policy discussions in response to large-scale network reliability or security concerns.

9/04 – present **Residential Computer Consultant (RCC)**, Residential Computing, Stanford, CA

- Respond to any computer or technology related concerns of over 60 dorm residents. Trouble-shoot network issues and a variety of hardware/software problems on Windows and Macintosh platforms.
- Educate students about important security issues, such as spyware, worms/viruses, and software updates.

6/03 – 9/03 **High Performance Networking Research Group,** Computer Science Dept, Stanford, CA

- Designed and implemented software to let network hardware developers communicate with a device call a NetFPGA. Provided scriptable command-line and web interfaces that used SOAP to send commands to a remote server that then communicated directly to the NetFPGA board. The server and clients were written using Java, and the low-level packet injection and manipulation used C with libnet and libpcap libraries.
- Created automated test-suite to assure correct configuration and operation of the NetFPGA server.

6/02 – 9/02 **Engineering Intern**, Plumtree Software, San Francisco, CA

- Worked with Senior Engineers on large portlets that act as clients to enterprise apps on remote servers.
- Designed and developed a complex, attractive, and reusable Java / DHTML web user interface which accepted and returned data in a standard XML format.
- Assisted QA engineers in developing test plans, and designing and implementing automated tests.

Technical Skills:

- High Proficiency in Java, C++, C, and strong familiarity with JavaScript/HTML.
- Highly knowledgeable about core networking protocols and mechanisms, including TCP/IP, UDP, ICMP, BGP, DNS, and major cryptographic protocols.
- Strong knowledge of network socket programming, with experience in C, Java and Perl.
- Experience using nmap, ethereal/tcpdump, Nessus, and other standard network security utilities.
- Daily experience working and developing in a Linux environment.
- Extensive use of the JUnit testing framework for development and QA.
- Experience working with Perl + CGI, Servlets + JSP, SQL, VB/ASP, and XML technologies.

Technical Interests:

- Malicious code detection and mitigation; including worms, viruses and spyware.
- Trusted and reliable system design and verification.
- Distributed system and Peer-to-Peer design and analysis.
- Host and network virtualization and simulation.
- Wireless networking systems.
- Robust and secure Internet transfer and routing protocol design.
- Internet/network topology mapping and visualization.
- Economics of Internet security mechanisms and defense risk analysis/metrics.

Leadership Roles and Community Involvement:

9/04 – present: **Residential Management Team**, Residential Education, Stanford, CA
9/03 – 6/04: **Dorm Residential Staff**, Residential Education, Stanford, CA
1/04 – 6/04 **Computer Science Tutor**, Stanford Tau Beta Pi, Stanford, CA
9/02 – 6/03: **Student Rep. on the Committee on Academic Computing and Info. Systems**, Stanford, CA
9/02 – 6/03 **Student Leadership Director,** Associated Students of Stanford Univ, Stanford Univ.
9/02 – 6/03 **Student Tutor/Mentor**, East Palo Alto Tennis and Tutoring, Stanford, CA

Outside Interests: Running marathons, exploring technology law & policy, and traveling.