Jason R. Coombs

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Professional Objective

Apply progressive and pragmatic approaches to computing challenges through agile software engineering

Education

MS in Computer Science, May 2002
New Mexico Institute of Mining and Technology (Socorro, New Mexico)

Overall GPA: 3.95 out of 4.0

Subjects: Thesis titled "Simplex Internet Protocol: A High Reliability Design for Simplex Communication for Security Applications", Networking and the Internet, Managing Web (Semistructured) Data, Cryptography.

BS in Computer Science and Mathematics, Dec 1998
New Mexico Institute of Mining and Technology (Socorro, New Mexico)

Overall GPA: 3.9 out of 4.0

Subjects: Systems Programming, Operations Research, Zero Defect Software, Software Construction.

- In 1995, deployed and ran a 8-node 10-base-2 fully-routed TCP/IP network using Windows NT 4.0 as a router, DNS server, and authentication server in my dorm room.
- For operating systems, port of RT Linux to Sparc 3 platform.

Employment History

Senior Software Engineer
Innovative Management Concepts (Dulles, Virginia)
Oct 2006–Present

Achievements:
- Developed FormworX product to beta-test quality for commercial release

Senior Software Engineer
Sandia National Laboratories (Albuquerque, New Mexico)
Sept 1993–Oct 2006

Achievements:
- Primary systems administrator for Windows-based servers and secondary administrator for Unix-based servers for all International Programs applications
- Created secure network to transport unified authentication across WAN sites
- Restored working relationship between our center and corporate computing groups, developing secure yet highly effective solutions to difficult problems
- Led design and migration of a monolithic legacy imaging system to an user-friendly, elegant, distributed, modular approach
- Created an XML/SQL-based data warehousing and distribution system for international peacekeeping efforts
- Invented an XML-based, declarative language (similar to XSL) for description of data-collection techniques
- Received high acclaim for network security and cryptographic presentations at International Nonproliferation conferences with Russia, China, and South America
- Presented "Digital Identification" at exclusive Next Generation of Nuclear Scientists workshop between U.S. & Russian weapons laboratories
- Developed an extensible HTTP/SSL interface in an ARM7 embedded device for our Secure Sensor Platform
- Provided instruction in and deployment of network security systems for International Safeguards partners
- Successfully merged data collection and analysis efforts from five different nuclear and environmental monitoring projects, designed to mitigate international tensions due to environmental concerns
- Co-developed a "Customers and Capabilities" matrix, drawing data from disparate data sources to provide a simple but advanced perspective on organizational structure

- Led development of a data transformation system for automating downloads for port security applications, dramatically accelerating project capabilities
- Constructed an interactive 3-D model of a nuclear storage facility for simulation of operational activities
- Introduced standard protocols for data exchange with our Russian collegues using XML and SQL Server
- Promoted a more cooperative team attitude and improved relations with our internal customers
- Developed aptitude for international activities in high-technology engagements
- Received 2006 top 5% merit award for China safeguards engagement

Computer Related Skills

Networks & Computer Security: Wireless Networks, Ad-Hoc Network Research, Cryptography and Public Key Infrastructure.

Programming Platforms: Python (extensive), C++, Java (extensive), OpenLaszlo, XML (incl DOM, XML-Schema, XSLT, CSS, SOAP), Scheme and Lisp.

Software Skills: Agile programming, advanced web portal development, semistructured & relational data management, Windows development (services, user applications), Linux (kernel development), Active Directory programming, Internet applications, distributed computation.

Hobbies

- System Administration. Administer personal Windows Domain with Exchange Server 2003, multiple organizational units, and multiple application domains. Domain integrates with Linux-based wireless router, provides PPTP/IPSec VPN service, multiple web applications behind IIS and apache.
- Free SSL Certificate Support. For cert.startcom.org, developed and maintain a web to text bridge to enable automated authorization of domains for free free certificate customers around the globe including .gov, .ar, and .za.

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