Curtis M. Smith

seeking employment opportunities in north or central Florida
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Personal summary: Creative software engineer with competence and expertise in network security, real-time concerns, communications, reliability, and protocol implementations.

Employment

International Business Machines Corp. – July 2006 through present

- Developed Protocol Analysis Module (PAM) software to analyze network traffic to detect and mitigate intrusions, exploits of vulnerabilities, viruses, audits, and other notable events.
- Wrote and maintained high-quality multiple parsers of network traffic and file contents in a real-time environment intolerant of errors or excessive latency.
- Collaboratively developed in rapid-release agile environment for releases multiple times per month, as new information related to security vulnerabilities was acquired or researched.
- Responded to malware trends with implementation of anticipatory protection of future attack vectors.
- Worked in environment with thorough unit testing, testing for regression of functionality, and testing compliance with requirements for maximal exercise of each line of source code.
- Created Software-as-a-Service (SaaS) and other Application Programming Interfaces at the modular level, REST interface, and protocol streams for status, logs, testing, configuration.
- Dealt with external parties for product quality and effectiveness testing.
- Implemented client software for cloud-based machine learning and image processing,
- Presented practical guidance to software developers regarding the creation of secure environments: sound code, validating interfaces, and trustworthy authentication.
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Videoconferencing Systems, Inc. / Simtrol – May 1993 through June 2006

- Ground-up design and development of Omega and Ongoer lines of video-conferencing and device-control systems including control of codecs, camera servos, video routers, audio processors, infrared transceivers. Remote diagnostics via web browsers, SNMP, etc.
- Implemented cross-platform programming interface to provide implicit multithreading, auto program-module synchronization, deadlock preclusion, and intrinsic code structure.
- Technical liaison for joint development projects with national and international firms.
- Granted seven patents for novel video-conferencing technologies including mouse-driven control of camera positioning and networked video-conferencing system.

American Telesystems Corporation – January 1986 through April 1993

- Developed of Express Messenger and Voicemate voice mail and voice response systems with full remote operational capabilities on PC hardware using VRTX real-time kernel.
- Wrote device drivers for disk, telephone interface boards, and serial communications.
- Created 80386 kernel to provide memory paging and debugging for virtual 8086 tasks.

School

Master of Science in Electrical Engineering - Georgia Institute of Technology, 1985
 Areas of concentration: computers, communications, and digital signal processing
Bachelor of Science in Electrical Engineering, with Honors - University of Florida, 1984

Expertise

Languages: C, C++, JavaScript, Java, SQL, PHP, Julia, Python, assembly languages, shells
Tools: Rational Team Concert (Eclipse), Visual Studio, Wireshark, gcc, DB/2, SQL Server, MariaDB, QRadar, Jenkins, node.js, WebSphere, Docker, virtual machines
Protocols: HTTP, SIP, H.323. SMTP, IMAP3, DNS, SNMP, FTP, IP, TCP, UDP, JSON, REST APIs, *etc.*
File Formats: HTML, JavaScript, CSS, PDF, EMF, JPEG, PNG, ASN.1, zip, XML, MPEG-4, *etc.*

Other

- Member of the Institute of Electrical and Electronics Engineers & IEEE Communication Society
- Amateur radio operator KD4CCM
- Square dance caller at mainstream and plus dancing levels (BMI/ASCAP licensed)