Contact information

Madhu Siddalingaiah
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Experience

Core competence

- Development of wireless, enterprise, and embedded systems
    - Handheld devices and smartphones
    - High volume, secure, transactional enterprise application development and integration
    - Real time embedded systems, device drivers, and customized operating systems
    - Efficient/high performance algorithms and systems
- 10 years technical management of software and hardware systems development
- 10 years experience Java, J2EE and Internet application development
- 10 years experience in corporate training
- 15 years experience in object oriented development and methodologies
- 15+ years experience in C, C++, and assembly

Soft skills

- Excellent verbal, written, presentation, and teaching skills
- Experienced in business proposal preparation
- Delivered more than 100 presentations in North America, Europe, Asia, and Australia

Additional expertise

- Information security and cryptography
- Compiler construction and code generation
- Digital signal processor (DSP) algorithms and firmware
- Experienced in numerical simulations and information visualization
- Analog and digital hardware design
- Familiar with lean six sigma methodology
- Strong math, computer science, engineering, and physics fundamentals

Industry experience

Aerospace, Health care, Financial, Energy, Defense, Wireless, Scientific research

Publications

- XML and Web Services Unleashed February 25, 2002, published by Sams
- Java API for Dummies Quick Reference April 18, 1997, published by IDG Books
- Java How-To September 1, 1996, published by MacMillan
- Hands-On Java Programming Learning Tree International
- Numerous articles for online and print publications

Education and certifications

- B. Sc. physics 1989, University of Maryland, College Park
    - Emphasis in math, computer science and electrical engineering
- Member ACM
- Private pilot, rotorcraft-helicopter rating
- DoD secret clearance
- US Citizen

Employment History

May 1996-present, Consultant
Science and Engineering Applications
Information technology development, management, consulting and mentoring. Specialize in Java, XML, security and Internet systems for enterprise, handheld, and embedded applications. Customers include Addison-Wesley, Apple Computer, Blue Cross/Blue Shield, Booz-Allen Hamilton, Food and Drug Administration, and Sun Microsystems.

Dec. 1993-Apr. 1996, Consultant
Naval Research Laboratory
Critically involved in the design, integration, and testing of a research satellite instrument (High Resolution Airglow/Auroral Spectrograph HIRAAS). Designed and coded all flight software along with ground support equipment. HIRAAS is a three instrument payload designed to measure ultraviolet air glow in the upper atmosphere. it is mounted on the earth side of a polar orbiting, sun synchronous satellite.

May 1993-Dec. 1993, Consultant
Fairchild Space and Defense
Member of an elite team assembled to design and develop a Silicon Graphics GL compliant graphics accelerator for sun sparcstations (TRU-D). Responsible for much of the geometry transformation algorithms along with rendering engine interface routines. TRU-D was a low cost alternative to Silicon Graphics in the medium speed (100,000 to 200,000 polygons/second) range. it includes Goraud shading, anti-aliased polygons, and high speed texture mapping.

Jul. 1992-May 1993, DSP Engineer
Watkins-Johnson, Communication Electronic Technology Division
Digital project engineer for a DSP based, portable direction finding receiver, WJ-8996. Designed all digital control electronics and developed many of the signal processing algorithms used for direction finding and demodulation. also assisted in the design of the RF synthesizers. The WJ-8996 is a general coverage receiver specially designed with a floating point signal processor to determine angle of arrival of signals in the range of 20-2000 MHz. The WJ-8996 is battery powered, includes an Ethernet interface and AMPS/TACS cellular intercept capability. The electronics were optimized for low power and high performance.

Oct. 1989-Jul. 1992, Engineer
Naval Research Laboratory
Designed flight hardware/software and ground support equipment for satellite instruments which include Remote Atmospheric/Ionospheric Detection System (RAIDS) and Special Sensor Ultraviolet Limb Imager (SSULI).

Jan. 1984-Oct. 1989, Undergraduate Research Assistant
Institute for Research in Electronics and Applied Physics
(formerly Laboratory for Plasma and Fusion Energy Research)
University of MD at College Park
Designed instrumentation electronics for automated data acquisition of Electron Beam Transport Experiment (EBTE). Detectors include low light level CCD camera digitized in real time by custom hardware.