

Sandeep Dube

Accomplished Technology Leader and Architect with over 16 years of progressive IT and research experience in the area of System Design, Algorithms, Software Architecture and Engineering.

Cherry Hill, NJ - Email me on Indeed: [indeed.com/r/Sandeep-Dube/d51e02b1aceb6f5c](https://www.indeed.com/r/Sandeep-Dube/d51e02b1aceb6f5c)

Accomplished Technology Leader and Architect with over 16 years of progressive IT and research experience in the area of System Design, Algorithms, Software Architecture and Engineering. Proficient in research as well as prototype and production grade software implementation. Extensive experience in object-oriented design and modeling of large and complex software systems using C/C++. Experience in Java, C# and other programming languages. Excellent analytical and problem solving skills combined with ability to learn new technologies quickly. Proven ability to effectively lead a team of creative professionals to achieve focused results. Extensive experience in S/W development Life cycle, methodology like Waterfall, Agile and project management. Supported customers for projects with large scale deployments. Able to handle multiple projects concurrently. Represent the Company on International Standard groups like OSCI (Open SystemC Initiative). Authorized to work in the US for any employer

WORK EXPERIENCE

Senior Software/Firmware Engineer Research and Development

Checkpoint Systems - Thorofare, NJ - 2012 to 2016

- = Specifying, Designing, Implementing, Releasing, Documenting and Supporting embedded software and firmware products for R&D software development department using C# / C / C++ and Embedded RTOS / Embedded Linux.
- = Developing utilities to support embedded system using C# /C/C++and Java.
- = Supervision of junior level developers or contract personnel, leading small interdisciplinary teams in completion of embedded software engineering projects.
- = Prepare and present complex technical issues and proposal effectively to internal management.
- = Interact with client, trouble shoot there problems, maintain liaison with customers and vendors.
- = Developed high throughput, low latency, distributed, Multi-Threaded, DSP and Data Processing algorithms for RFID and RF based system for Inventory, Security, Theft and Fraud in Retail industry.
- = Helped company develop product that contribute 25 % of company revenue.
- = Project and Technical lead for Development team spread across USA, India and China.

Lead Software Engineer

Bally Technologies/Gaming (Acquired by Scientific Games Corporation) - Egg Harbor Township, NJ - 2007 to 2012

- = Design and Development of embedded multi-threaded S/W, video, 2D graphics, user interface and communications protocols related to gaming machines using C++, C on QNX, Windows XP Embedded.
- = Contributed to company effort to adopt a single platform for our embedded development and helping save millions of dollars.
- = Took Development effort in house from another company for our critical software and help build team in USA (developed team of 5 engineers) and India (developed team of 10 engineers).
- = Train Engineers in S/W development and Supervise and Review work of engineers, designers, draftsmen, or technicians, Act as planner/coordinator/team mentor in a multi-person and multi location development team.
- = Interact with client, trouble shoot there problems, maintain liaison with customers and vendors.

- = Developed Algorithms to implement various wagering schemes and to improve response time of interaction with the back end.
- = Handled team spread across geographies (East coast and West Coast USA) and India.

Senior Software Consultant

Verizon - Tampa, FL - 2007 to 2007

From Samsun Technologies)

- = Design and Development for Integrated Verizon Advanced Provisioning Platform (iVAPP), a FTTP provisioning platform for voice, data, and video, Unit and integration testing and Supporting installation and production, defining and documenting iVAPP interfaces using C++, Java ,XML, UNIX.

Senior Software Engineer

Samsun Technologies - Princeton Junction, NJ - 2007 to 2007

- = Designing, Developing, Testing and Documentation of program functions and steps to conduct and interpret COGBIS modules using C

Project Lead Software

Atrenta, INC (Acquired by Synopsys Inc.), - Noida, Uttar Pradesh - 2004 to 2007

- = Design, Development, Specification and Prototyping of Analysis frame works and Rules for 1TeamSystem a product that checks for design flaws in SystemC design, 1TeamEmbedded a product which helps to find out if the C++ code follows guidelines for embedded programming and good practices (MISRA C C++), Genesis (Electronic System Level) ESL based tools used for creation of SOC and there GUI interfaces using QT. Responsible for various phases of Project/Product life cycle.
- = Implemented Complex DFT algorithm, which were mainly Graph and Tree algorithm for Spyglass DFT a tool for analyzing Designee for Testability of VHDL and Verilog descriptions.
- = Mentor team members, gather requirements from customer and provided support to them.
- = Helped company launch new products like 1TeamSystem, 1TeamEmbedded and Genesis.

Technical Lead Embedded Processor Group

Philips Semiconductor (NXP), PIC - Bangalore, Karnataka - 2001 to 2004

- = Design, Development, of simulation models of open architecture and Philips specific peripherals and processors using C/C++/SystemC, Testing them for behavioral / functional correctness and cycle accuracy and Authored requirement specifications, detailed design and test specifications.
- = Part of architecture exploration and performance evaluation team for SOC (System on Chip) and next generation architecture for various products involving multiple teams located worldwide.
- = Provided expertise in design and simulation to other teams and customers.
- = Represented Company on OSCI.
- = Improved Simulation time and throughput of C / C++ multi-threaded models of Systems on Chips using optimization techniques.

System Analyst

Department of Computer Science and Engineering, IET - Lucknow, Uttar Pradesh - 1993 to 1999

- = Responsible for teaching subjects like Discrete Mathematics, Theory of Computation, Image Processing, Numerical Methods, Performance Evaluation of Computer Systems, Fault Tolerance, MIS, Artificial Intelligence to graduate and undergrad students and guided their projects.
- = Execution and development of various in-house and sponsored projects in the department.

EDUCATION

Master of Technology in Computer Science & Engineering

IIT - Guwahati, Assam

Bachelor of Technology in Computer Science & Engineering

NIT (REC) - Calicut, Kerala

SKILLS

C, C++, C#, .NET, Visual Basic, STL, POSIX, BOOST, SystemC IEEE 1666, Verilog, VHDL, Java, Unix Shell, Bash, Perl, Tcl/Tk, PL/SQL, multithreading, multi-threading, OOAD, UML, design patterns, XML, HTML, Javascript, Pascal, Prolog, LISP, Fortran. (10+ years), TCP/IP, HTTP, SOAP, socket programming, SNMP, SSL, 802.15.4 (ZigBee), 802.11 (Wi-Fi), Eclipse, Rational Rose, UML, Microsoft Visual Studio 7.0, Gdb, Atmel Studio, MPLAB, IAR, Green Hills, Jira, Confluence, Continuous, Star Team, Perforce, CVS, SVN Subversion, GIT, SourceOffSite, SCCS, Valgrind, Gprof, Model Sim, Spyglass, Genesis, CCynthesiser, NC Tools (Cadence), QNX Momentics IDE, Microsoft Office Visio and Project. (10+ years), Pthreads, Unix IPC/ Sockets. Oracle, Access, dBase, MySQL, Orbix, Visibroker, Tuxedo, WebSphere MQ, OpenGL, OpenCL, Unix (HP UX / Solaris / Linux), Windows, Embedded Linux, Win CE and Windows XP Embedded, QNX, Green Hills Integrity, MQX., AMBA (AXI, AHB, APB ASB), PI protocols and ARM, MIPS based architecture I2C, SPI, RS232, RS485, UART, DMA, USB, TTL, Ethernet, Motorola 68EC020 boards, Power PC Motorola MPC855T and TI TMS320C6204) board, ARM 9 / 11 boards, ATOM boards, ATMEL boards, Blackfin boards, Freescale NXP Boards, PIC Microchip Boards.

AWARDS

Highest marks

Highest marks in Masters in Computer Science and Engineering at IIT, Guwahati.

CERTIFICATIONS

Coursera Course: Usable Security (Part of Cyber Security Track), University of Maryland, College Park,

<https://www.coursera.org/account/accomplishments/certificate/MHJT98XHZB>

Coursera Course: Hardware Security (Part of Cyber Security Track), University of Maryland, College Park,

<https://www.coursera.org/account/accomplishments/certificate/BYEBZQJJRG>

Coursera Course: Fundamental of Project Planning and Management, University of Virginia

<https://www.coursera.org/account/accomplishments/certificate/NEQ539BMN8>

PUBLICATIONS

“An Efficient Fractals-based Algorithm for Clustering” Regular paper IEEE TENCON 2003, Bangalore (IEEE Region 10 Conference)

2003

“Graphics with Fractals” Poster Paper IEEE CTT 2000 Bhubaneswar.

2000

“SystemC-Based Platform Modeling: Issues Related With Hardware Modeling” ESCUG 2003, Stuttgart.

2003

Internal Publication: White Paper “Cyber Security: Aspect of Hardware Security Relevant to Checkpoint”, Presentation “Support for Security in i.MX 6 and C1G2 Standard”.

2015

ADDITIONAL INFORMATION

TECHNICAL SKILLS

Hardware:

AMBA (AXI, AHB, APB ASB), PI protocols and ARM, MIPS based architecture I2C, SPI, RS232, RS485, UART, DMA, USB, TTL, Ethernet, Motorola 68EC020 boards, Power PC Motorola MPC855T and TI [...] board, ARM 9 / 11 boards, ATOM boards, ATMEL boards, Blackfin boards, Freescale NXP Boards, PIC Microchip Boards.

Operating Systems: Unix (HP UX / Solaris / Linux), Windows, Embedded Linux, Win CE and Windows XP Embedded, QNX, Green Hills Integrity, MQX.

Languages:

C, C++, C#, .NET, STL, POSIX, BOOST, SystemC IEEE 1666, Verilog, VHDL, Java, Unix Shell, Perl, Tcl/Tk, PL/SQL, multithreading, OOAD, UML, design patterns, XML, HTML, Javascript, Pascal, Prolog, LISP, Fortran.

Databases: Oracle, Access, dBase, MySQL

Middleware: Orbix, Visibroker, Tuxedo, WebSphere MQ, OpenGL, OpenCL

Networking: TCP/IP, HTTP, SOAP, socket programming, SNMP, SSL, [...] (ZigBee), 802.11 (Wi-Fi).

Tools / Utilities:

Eclipse, Rational Rose, UML, Microsoft Visual Studio 7.0, Gdb, Atmel Studio, MPLAB, IAR, Green Hills, Jira, Confluence, Continuuus, Star Team, Perforce, CVS, SVN Subversion, GIT, SourceOffSite, SCCS, Valgrind, Gprof, Model Sim, Spyglass, Genesis, CCynthesiser, NC Tools (Cadence), QNX Momentics IDE, Microsoft Office Visio and Project.

APIs: Pthreads, Unix IPC/Sockets.