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Saurabh Jain

Objective

To display on my website.

Experience

Oct 2007-present [Thinvent Technologies Pvt. Ltd.](#) Gurgaon
CEO

- Thinvent is a startup co-founded by me. It provides Linux based total solutions to the government, education and small business sectors. Our focus is on the Rural IT market.
- As CEO of a small company, I handle multiple roles - technology development, management, marketing, finance, etc.
- Involved in the development of a SIP soft switch and media gateway for a large telecom equipment manufacturer. Also consulted on telecom rollouts involving triple play, WiMax, etc.
- Created an embedded Linux environment for thin clients. This product is being widely licensed by numerous customers.
- Developed a unified ticketing terminal for unreserved and reserved ticketing of Indian Railways. Salient features include high security, support for Indian languages, and very fast turnaround times for ticketing. Software is successfully deployed on 4000+ computers.
- Developed and supported kiosks and terminals for IR projects such as CMS, PMS and SLAM. Also developed biometric, breath analysis, SMS gateway, load balancing and HA solutions for these projects. Software running on 1500+ computers.

Mar 2006-Oct 2007 [VXL Instruments Ltd.](#) Bangalore, KA
Engineer, Projects

- Heading VXL's Linux solutions division. We develop packaged and customised IT solutions for verticals such as e-governance, education, small and medium business, telecenters and healthcare.
- Provided an IT training solution to IEG, a government body. System uses diskless thin clients and servers running Linux. Supports web and application development, multimedia streaming, video conferencing, etc.
- Provided a secure, robust ticketing kiosk to the Indian Railways. Currently deployed in the Mumbai local train network.
- Support escalations with VXL's Linux product chain, worldwide, were resolved by me. Provided timely and satisfactory support to customers.
- Managing the VXL IT system, including network, email, ERP, R&D labs, remote access, WAN, VoIP, data and application servers, etc.

Apr 2005-Mar 2006 [Intel IIDC](#) Bangalore, KA
Software Engineer, MPSD

- Developed server management firmware for Intel's server products.
- Interacted with marketing and factories to resolve customer issues.
- Lab manager for IIDC SMFW. Handled procurement, safety standards enforcement, shifting and setup, inventory, shipping, etc.

Feb 2005-Apr 2005 [Intel IIDC](#) Bangalore, KA
Software Engineer, Ethernet Switching Operations

- Developed **BSPs** for Intel's Ethernet switching products.
- Developed manufacturing diagnostics for switch blades.
- Worked on the I²C interaction between management and switch modules.
- Formulated an idea for intensive in-chassis testing of switch blades.

2004-2005 [Impulsesoft](#) Bangalore, KA
Senior Software Engineer

- Developed firmware for Bluetooth personal audio devices.
- Created the audio and graphical user interface for an A2DP and SCO compliant sink.
- Optimised the graphical engine manifold, so it could perform on the limited processing ability of the embedded processor. Simulated multitasking on a single task RTOS, so that the engine does not interfere with real time tasks such as audio and wireless.

2003-2004 [Samsung SISO](#) Bangalore, KA
Senior Software Engineer, Digital Printing Division

- Developed real time Internet fax firmware as per ITU-T T.38.
- Developed embedded network applications for multifunctional peripherals. Involved in complete project lifecycles.
- Organised training, quizzing and team building activities for the division.
- Co-ordinated the division's **patenting** efforts. Filed nine patents.
- Developed and enforced coding standards as per CMM Level 5.

2002-2003 [IIT Madras](#) Chennai, TN
Masters research under Dr. T G Venkatesh

- Established four cluster computers. Enhanced their performance by 25%.
- Modelled the human visual cortex using artificial neural networks.
- Created a job scheduler using parallel genetic algorithms.
- Ethernet and IP network switching and management.

Summer 2002 [University of Cincinnati](#) Cincinnati, OH, USA

Summer Intern under Dr. Dharma P Agarwal

- Wireless access for rural communities using **802.11**.
- Conducted simulations with ad-hoc routing protocols on the ns-2 platform.
- Studied applications of directional antennas in extending network range.

2000-2002 [IIT Madras](#) Chennai, TN

Project Student under Dr. Devendra Jalihal

- Voice **switching**, call monitoring and tones on DSP for corDECT.
- Developed a Linux **kernel driver** to perform ARQ and CRC on **wireless** data channels and interface them to a PPP daemon.
- Worked on diskless workstations and concept thin clients.

Summer 2001 [MIT Media Lab](#) Cambridge, MA, USA

Summer Intern under Dr. Michael M Best

- A **VoIP** tool for rural communities.
- Wrote algorithms and software to monitor the channel, and adapt the codec parameters to varying bandwidth, latency and jitter.
- Helped design an illiterate-friendly graphical user interface for the tool.

2000-2003 [IIT Madras](#) Chennai, TN

System Administrator, Dept. of Electrical Engineering

- Maintained servers, a hundred terminals and a thousand user accounts.
- Responsible for email, DNS, proxy, remote access and other services.
- Provided guidance and support to various networks in IIT.

1990-1999 [ITECHS](#) Bhopal, MP

Operations Controller

- Itechs was our home business. Software development, data processing, training, design and publishing, were the major fields of activity.
- Technical: Hardware deployment. Network management.
- Management: Counselling, marketing strategy and staffing.
- Training: Various advanced software, hardware and networking.

Publications

- Saurabh Jain, Dharma P. Agrawal, "Wireless Community Networks," *IEEE Computer*, vol. 36, no. 8, pp. 90-92, Aug., 2003.
- Saurabh Jain, Sarin S B. "A multifunction peripheral device capable of printing unordered pages of a document in sequence." India patent application no. 1018/CHE/2004A. Oct. 27, 2006.
- Saurabh Jain, Sarin S B. "A rendering device capable of detecting the quality of paper used for producing hardcopies of

documents.” India patent application no. 1019/CHE/2004A. Oct. 27, 2006.

- Saurabh Jain, Sarin S B. “A method to forward facsimile documents to other rendering devices.” India patent application no. 1234/CHE/2004A. Apr. 20, 2007.
- Saurabh Jain, Sarin S B. “A method and system for preventing the production of illegal hard copies of a digital document marked with a predetermined security tag.” India patent application no. 970/CHE/2004A. Jun. 22, 2007.
- Saurabh Jain, Sarin S B. “A method for enabling access restriction to a peripheral that is connected to a networked PC.” India patent application no. 1070/CHE/2004A. Apr. 1, 2008.
- Four more patents, filed while at Samsung SISO. Under submission.

Relevant Courses Covered

Communications

- Computer Communication Networks
- Digital Signal Processing, Adaptive Signal Processing
- Image Signal Processing
- Digital Filter Design
- Analog and Digital Communications
- Principles of Communications, Communication Systems
- Artificial Neural Networks
- Networks and Systems

Electronics

- Microprocessors and Computer Architecture
- Analog and Digital Circuits
- Transducers

Operations Research

- Basic and Advanced Operations Research
- Queuing Theory
- Computer Simulation

Skills

Software

- Embedded: XScale, ARM7, ADSP 218x and 219x, 8086, 8051 assembly.
- Languages: C, Java, C++, Pascal
- OS: VxWorks, Zeevo BlueOS, pSOS+, Linux, Windows, Solaris
- Version Management and Bug Tracking: Rational ClearCase, PVCS, SVN.

Hardware

- Experience with 8086, 8051, ARM7, ADSP 219x and PowerPC based boards
- ARM architecture
- I²C bus
- Microprocessor interfacing

- Computer assembly and troubleshooting
- Network installation and management

Network Protocols

- FTP, SNPP, TFTP, DHCP, SMTP, POP3, SNMP, Telnet, etc.

Technical Interests

- Computer hardware, interfacing and networks.
- Assembly programming, DSP and digital hardware design.
- Object orientation, database and system design.
- Making technology user friendly, and more accessible to people.

Education

1998-2003 **Indian Institute of Tech. Madras** **Chennai, TN**

- Studied in the Five year Dual Degree Communications programme:
 - B.Tech in Electrical Engineering
 - M.Tech in Communication Systems
 - Minor in Operations Research
- Secured All India Rank **663** in the IIT Joint Entrance Examination.

1997-1998 **Maulana Azad College of Tech.** **Bhopal, MP**

- Studied in First Year, Bachelor of Engineering program.

1993-1997 **Campion School** **Bhopal, MP**

- Cleared the All India Senior School Certificate Examination conducted by the Central Board of Secondary Education, New Delhi, in 1997.
- Cleared the All India Secondary School Examination conducted by the Central Board of Secondary Education, New Delhi, in 1995.

1983-1993 **Mother's International School** **New Delhi**

- Secured second rank in class throughout Primary School.

Academic Distinctions

- 2002 *First* place in Programming and *second* place in Web Designing at the All India Cultural and Literary Festival, 2002, Mount Carmel College, Bangalore.
- 1996 Placed among the top five attendees at the *Mathematics Talent Search and Nurture Program* conducted by the Centre for Advanced Study in Mathematics, Panjab University, Chandigarh.
- 1996 *Third* rank in Madhya Pradesh state in the Regional Mathematics Olympiad.
- 1996 *Second* rank in Computer Quiz Contest conducted by the Computer Society of India, Bhopal Chapter.
- 1996 *First* in the Lupin Inter School Science Competition, Senior Group.
- 1996 *First* prize in Computer Awareness Quiz, St Xavier's Bhopal.
- 1995 *Second* rank in Bhopal Open Programming Contest organised by the Computer Society of India.
- 1994 *First* rank in Vedic Mathematics course.
- 1992 *Second* rank in the all-Delhi Manav Sthali Inter-School Mathematics Competition.
- 1990 *Second* rank in Delhi in the Aryabhata Inter-School Mathematics Competition.

General Interests

- Social and environmental volunteering
- Travelling; connecting with people
- Organising events; theatre
- Writing prose and poetry; reading; elocution; graphic design
- Swimming

Participation and Awards in Extra-Curricular Activities

- 1998-date Active member of the Association for India's Development (**AID-India**), an international NGO.
- 1999-date Volunteer for **Greenpeace**, an international environmental organisation.
- 1991-date Actively involved in theatre.
- 1998-date Member of ASHA for Education, a charity organisation.
- 2005-date Coordinating the rural IT outreach program of ELCIA Trust.
- 1998-2003 Organised charity sales during various cultural festivals at IIT.
- 2003 Core group member of *March4AID*, a charity show organised by leading Chennai colleges.
- 2002 Core group member of *March2Shiksha*, a charity show.
- 2002 Member of winning dramatics team at *Cul-Ah! 2002*, MCC.
- 2001 Core group member of *March2Gujarat*, a charity show.
- 2001 Core group member of *Aurangzeb*, a public production by Stagecoach, IIT's theatre group.
- 2000-2001 President of the **Rotaract Club** of IIT Madras.
- 1999-2002 Coordinator for the National Service Scheme, IIT Madras.
- 1999-2000 Vice President of the Rotaract Club of IIT Madras.
- 1999 Secured second rank in collage at Bharat Utsav, IIT Madras.
- 1999 Participated in the annual Wildlife Survey at the Guindy National Park, Chennai.
- 1994 Stood second in Inter-House Extempore Competition.
- 1993 Attended a course in Rock Climbing.
- 1993 Member of the winning team at *abhinaya*, an annual inter school dramatics event at New Delhi.
- 1987 Attended a Judo camp at JNS, Delhi.

Tips

I am a hard worker. Spending time in computer labs has been my passion since childhood.

References

- Dr. Devendra Jalihal, Professor dj@tenet.res.in
Department of Electrical Engineering, IIT Madras
 - Dr. Dharma P. Agarwal, Professor dpa@ececs.uc.edu
ECECS, University of Cincinnati
- Other references are available on request.