

Sandeep Jain

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EDUCATION

Master of Computer Science (1999), University of Illinois at Urbana-Champaign, Illinois, USA

BS, Engineering and Applied Science (1991), California Institute of Technology, California, USA

BA, Physics (1991), Pomona College, California, USA
(Joint Dual-Degree with the California Institute of Technology)

PROFESSIONAL EXPERIENCE

Independent Software/Machine Learning Consultant • Noida, India • 09/2001 – now (sample projects)

- My *interactive* website, which explains Machine Learning concepts to people who are new to the subject in a simpler way, is at <https://www.simplermachinelearning.com>.
- Created software to automate patient workflow management in medical clinics.
- Created Convolutional Neural Network based projects for courses for students of a New Delhi based company engaged in teaching Machine Learning skills to students.
- Invented ml4debugging, a project to use machine translation (based on Machine Learning) to translate the error messages of a computer program interpreter or compiler into natural English language, using Recurrent Neural Networks (<https://ml4debugging.github.io>).
- Created Tuitsoft, a web based software service that simulates an intelligent tutor in teaching mathematical problem solving skills, by engaging each student in an interactive dialogue.
- Developed urWell, an iOS program to track people's wellness for a Californian company.
- Design and development of a Java J2EE based content management system for a California based multi-national company, for which I was the Lead Engineer.
- Led the development of a client side wireless instant messaging software product at a New Delhi based company, for which I was the Lead Architect.

Technical Architect • TechSpan (now Genpact) • Noida, India • 10/1999 – 09/2001

- Learned and applied the Unified Modeling Language (UML) to design and build high quality software for TechSpan's clients.

Tutor • New Delhi, India • 09/1994 – 06/1998

- Tutored students of the American Embassy School in maths, science, and computer science.

Software Engineer (Neural Networks) • California Scientific • Nevada City, CA, USA • 08/1991- 07/1994

- Developed neural network based pattern recognition software, and implemented pattern recognition solutions for companies who purchased the software from California Scientific.
- Invented an innovative way to classify one dimensional signals such as biomedical signals using multi-layer perceptron neural networks, using the signal structure or morphology.

Research Assistant • California Institute of Technology • Pasadena, CA, USA • 01/1990 – 05/1991

- Built an electronic interface between live biological neurons, and a lab computer.

Summer Undergraduate Research Fellow • Jet Propulsion Lab • Pasadena, CA, USA • Summer, 1989

- Worked on a project to bring the rocket engine technology of JPL to the automobile industry.

INDUSTRY COURSES TAKEN

- Deep Learning Specialization from Coursera, taught by Professor Andrew Ng of Stanford, 2018
- Object Oriented Analysis and Design Using UML, by Rational Corporation, 2000