

Sandeep Jain

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EDUCATION

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

BS, Engineering and Applied Science (1991), California Institute of Technology, California, USA
(Focus area: Computation and Neural Systems)

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

PROFESSIONAL EXPERIENCE

Independent Software/AI Consultant • Noida, India • 09/2001 – now (highlights):

- My Simpler Machine Learning website, <https://www.simplermachinelearning.com>, which explains AI using dynamic interactive simulations embedded in the browser.
- Invented ml4debugging, a project to use machine translation (based on AI) to translate the error messages of a computer program interpreter or compiler into natural English language (<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.
- Created "Planet Laws: Know your Solar System", a beautiful iOS based program to explain the laws of planetary motion.
- Led a team developing a Java J2EE based website for a large Californian company.
- Led the development of a client side wireless instant messaging software product (a precursor to Whatsapp), on a variety of platforms, in a CTO level role.

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 object oriented software, mostly in Java, 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.

AI Engineer • California Scientific Software • Nevada City, CA, USA • 08/1991- 07/1994

- California Scientific Software was an early AI startup of Caltech engineers.
- Developed neural network pattern recognition software (in C++), and implemented pattern recognition solutions for companies who purchased the software.
- 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.
- Was on the editorial board of the Handbook of Neural Computation, published by Oxford University Press and the Philadelphia based Institute of Physics publishing.

Research Assistant • Caltech • 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, using networks of fault tolerant sensor systems.

INDUSTRY COURSES TAKEN

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