Neeraj Gangwar

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Education

University of Illinois, Urbana-Champaign, IL, USA — Aug 2021 - Present
Ph.D. in Electrical and Computer Engineering

Indian Institute of Technology Roorkee, Uttarakhand, India — Jul 2009 - Jun 2014
B.Tech. in Electronics and Communication Engineering
M.Tech. in Wireless Communication

Employment

University of Illinois, Urbana-Champaign, IL, USA
Graduate Research Assistant — Aug 2021 - Present

I am studying ways to effectively represent mathematical equations in a continuous vector space (similar to word2vec for natural text) under the supervision of Prof. Nickvash Kani.

Myntra, Bengaluru, KA, India
Technical Lead — Apr 2019 - Aug 2021

I led a team of three people that managed the inventory systems of Myntra. I was responsible for maintaining and supporting the inventory systems as well as software architecture and design of new features. I was also responsible for building the technical roadmap for the team. The projects included scaling inventory systems to support 1000x traffic and salvaging the orphan inventory in Myntra warehouses.

Senior Software Engineer — Mar 2017 - Mar 2019

I worked in the tech team for warehouse management. The main projects included last-mile consolidation and multi-tenancy to enable multiple tenants on the existing systems. I also led a team of four people to overhaul the design and architecture of the stock transfer workflow. I acquired skills in system design and architecture, asynchronous frameworks, and team management.

AIANash/Shoplane, Bengaluru, KA, India
Co-founder — Sep 2015 - Jan 2017

I worked in a team of three on creating a platform to improve online customer experience by predicting user intent. The initial work was on developing a smart shopping experience employing artificial intelligence. It later shifted to creating a B2B artificial intelligence-driven analytics platform. I worked on deep learning algorithms, Gaussian processes, and topic modeling and developed mathematical modules for the same.

Commonfloor, Bengaluru, KA, India
Software Development Engineer 1 — Jun 2014 - Sep 2015

I was part of the revenue team in the real-estate vertical. I worked on lead sharing and pricing modules. I also developed a JavaScript plugin to track and analyze the impressions to find the ad performance on the product pages.

Internships

IBM India Software Labs, Bengaluru, KA, India
Extreme Blue Internship Program — May 2013 - Jul 2013

I worked on the timing analysis of digital circuits and created core data models for GLSM that were modular and multi-threadable.

Defence Research and Development Organisation, Bengaluru, KA, India
Summer Intern — May 2012 - Jul 2012

I analyzed the helix slow-wave structure (SWS) and compared the results with HFSS results (MATLAB).

Research Interests	Bayesian deep learning, computer vision, deep learning, interpretability, language processing, theoretical machine learning.
Relevant Coursework	Pattern Recognition, Mathematical Models of Language, Deep Learning, Computer Vision, Probability Theory, Information and Communication Theory, Adaptive Filter Theory, Data Structures and Algorithms, Computer Networks.

Publications

Under Review

1. Semantic Representations of Mathematical Expressions in a Continuous Vector Space
   Neeraj Gangwar, Nickvash Kani (2022)

Teaching

EC-362: Communication Systems Lab, IIT Roorkee
Teaching Assistant with Prof. Debashis Ghosh

Extra-Curricular Activities

Mentor, DIYA Research [diya-research.org]	Summer 2022
Member of SDSLabs [sdslabs.co], IIT Roorkee	2010 - 2014
Coordinator of the Linux Group, IIT Roorkee	2011 - 2012
Member of the National Service Scheme (NSS), IIT Roorkee	2009 - 2010

Open Source

Contributed the following to `scikit-learn`:

1. Repeated cross-validators [PR #8120].
2. Enhance the documentation for coverage error [PR #7915].