

EDUCATION

Indian Institute of Technology Mandi (IIT Mandi)

2009 - 2013

B-Tech Electrical Engineering, 2013

CGPA: 8.11/10 | Major GPA - 8.6/10

Courses: Artificial Intelligence, Digital Image Processing, Soft Computing, Computer Architecture, Web Based Information Management, Computer Networks, Network Management Systems, Cryptography.

AREAS OF INTEREST

- Image Processing / Computer Vision
- Machine Perception
- Mathematical Optimization
- Algorithm Design and Analysis

RESEARCH AND ACADEMIC PROJECTS

Image Analysis Algorithms for Automated Cervical Cancer Detection using Pap-Smear Sample Slides

2011 - 2012

- Piloted a study at GTB Hospital PathLab(Delhi) to understand the Bethesda's system for reporting cervical cancer
- Designed and implemented an algorithm to classify images of squamous and glandular cervical cell abnormalities by using image processing and segmentation techniques. The algorithm classified images with 80% accuracy in the sample set

Optimisation of Energy Generation Processes - Electrical Load Forecasting (Bachelor's Thesis)

2012-2013

- Analysed load forecasting using EWMA, ARMA, ANN, Linear Regression. Reduced current electrical load forecasting error percentages in Himachal Pradesh (India) by 5% using weather and seasonal patterns observed
- Developed suggestion algorithms for electricity generation mixes between renewable & non-renewable energy

2-Tier SNMP Poll Manager

2012

- Developed an adaptive polling algorithm to poll network elements for their health based on a moving historical time-series

SEMINARS & PRESENTATIONS

Retail Supply Chain Optimisation in Hill Regions

Dec '12

Advisors: Dr. Niraj Sinha (IIT Kanpur), Dr. Manoj Thakur (IIT Mandi)

- Reduced freight costs by 4% by developing and optimising a linear mathematical model of supply chain in hilly regions. Presented in Supply Chain Management Conference at Indian Institute of Management Bangalore (2012)

PROFESSIONAL EXPERIENCE

Novopay (Incubated by Khosla Labs, Bangalore)

Apr'14-Present

Designation: Software Engineer, Analytics and Internal Applications

Advisor: Srikanth Nadhamuni (CEO, Khosla Labs) | **Website:** www.novopay.in, www.khoslalabs.com.

Responsibilities & Contributions:

- **Platform for Business Intelligence & Analytics:** Enhanced business insights by developing a business analytics backend infrastructure & real-time visual dashboards using elasticsearch and kibana stack.
- **Strategic Sales Planning & Management Tool:** Empowered sales team with mobile applications and dashboard tools to efficiently plan and manage their fleet using geo-fenced workflows, targets monitoring and analytics. The project resulted in 40% faster and efficient sales and customer support.

Vidura Inc. (Bangalore)

Jun'13-Apr'14

Designation: Software Engineer, Server Team (4 Engineers) | **Project:** Mobitrix, www.mobitrix.io

Responsibilities & Contributions: Led feature design and development along with evolution of the server architecture for a p2p data/voice streaming application.

- Enabled communication between peers behind NAT environment using TCP hole-punching & relay server
- Developed highly scalable relay servers supporting up to 1000 concurrent connections on an AWS EC2 c3.large instance. Achieved scalability using custom load balancer & auto-scale-on rules.

Delphi Automotive Systems, Technical Center India (Bangalore)

Jun'12-Jul'12

Designation: Systems Engineer (Intern)

- Developed configurable MATLAB-Simulink blocks to support hardware-in-loop algorithm testing of micro-controllers that use Controller Area Network (CAN) as their communication protocol thereby reducing costs of procuring commercial libraries for the same.

TECHNICAL SKILLS

Languages: Java, Python, Javascript, C
Frameworks: Spring(Java), Bottle(Python)
Data Stores: Elasticsearch, MySQL
Tools: MATLAB-Simulink, Kibana

EXTRA CURRICULAR ACTIVITIES

Music: Founded a music school in Mandi, India. Worked as a part-time guitar theory teacher.

Photography

- Founded the photo club at IIT Mandi.
- [istockphoto://uday_mittal](https://www.istockphoto.com/uday_mittal)
- [flickr://udaymittal](https://www.flickr.com/photos/udaymittal/)

Sports:

Lawn Tennis Team Captain at IIT Mandi.