

Bharat Giddwani

Room 245, Hostel H – NIT Raipur – Chhattisgarh, India

+91 8441029980 • bharatgiddwani@gmail.com
<https://www.linkedin.com/in/bharat-giddwani-b30640140/>

Pre-final year undergraduate at NIT Raipur pursuing a major in Electronics and Telecommunication Engineering with honors, applying for Research and Development opportunities in Deep Learning, Computer Vision, Deep Reinforcement Learning, Natural Language Processing, Machine Learning and Data Science.

Education

Bachelor of Technology with Honors	9.38/10.0
Electronics and Telecommunication Engineering, NIT Raipur	2016-2020
Intermediate/+2	91.00%
Kailash Vidya Vihar,(J.K.), Nimbahera, Rajasthan(CBSE)	2015
Matriculation	7.8/10.0
Kailash Vidya Vihar,(J.K.),Nimbahera, Rajasthan(CBSE)	2013

Research Projects

Undergraduate Project: Finger-reader: Vision to Speech

Guide: Prof Guide-Dr.R.N.Patel, EE Dept, NIT Raipur

Ongoing

- Developing a device based on embedded systems, machine learning and computer vision techniques.
- Will be capable of detecting general objects such as books with its depth from the device.
- Employing **OCR, NLP and Computer vision** programming which is used to read the printed text.
- Finger will be acting as a cursor for reading books sequentially by converting images of text to speech.

Undergraduate Project: A Data Driven: Fatigue Crack Detecting System

Guide: Prof Guide-Dr.R.K.Chaurasiya, ETC Dept, NIT Raipur

Ongoing

- A machine learning approach to detect fatigue cracks in metals such as Aluminum, Iron.
- Analyzed various time and frequency domain features on accelerometer and piezoelectric sensors readings
- Employing a **DSP system with SVM classifier**, on which data will be channelled for crack detection.

Internship Project: Rotation Invariant Object Detection

Guide: Prof Guide-Dr.Rama Krishna Sai Gorthi, EE Dept, IIT Tirupati

May-July 2018

- A novel machine learning and deep learning based approach to accurately detect objects in rotated images.
- Applied **PCA** to find the direction of spread of image pixels rotate it in accordance to the reference axis.
- Then pass the images to **pre-trained YOLOv3 model** (Improved YOLO model) in 'Pytorch' library.

Work Experience

Research Intern at Indian Institute of Technology, Kharagapur

Guide: Prof Dr.Bharath H Aithal, RCG school of IDM, IIT Kharagpur

Winter 2018-19

- Building Extraction using Semantic Segmentation on Indian City images.
- Experimentation with various Deep learning networks (U-Net, SegNet) for segmentation on satellite images by INRIA Aerial images in Tensorflow.

Research Intern at Indian Institute of Technology, Tirupati

Guide: Prof Dr.Rama Krishna Sai Gorthi, EE Dept, IIT Tirupati

Summer 2018

- Study and Implementation Object Detection in Natural Images using Deep Learning.
- Experimentation with various Deep learning frameworks (Tensorflow, PyTorch) and object detection models.

Industrial Training:Wireless Communication and Network Technologies

BSNL, ALTTC Ghaziabad (Uttar Pradesh)

Fall 2017-18

- Visited various Telecommunications labs. Briefly studied about different Telecommunication topologies, and different generations of mobile communication. Along with Next generation Network, Broadband, Wifi, Wi-Max, LAN, WAN, OFC etc., and Basics of IP Addressing (IPv4 and IPv6).

Technical Strengths

- **Programming Skills:** C, C++, MATLAB, Python, \LaTeX
- **Embedded Programming:** 8051, Arduino, MSP430, Raspberry-pi.
- **Simulation Tools:** LabView, and MATLAB-Simulink.
- **Operating Systems:** Windows, and Linux
- **Deep Learning Frameworks:** PyTorch, Keras, Tensorflow

Positions of Responsibility

- **IEEE Student Branch Member, NIT Raipur:** Had a volunteering and leadership experience at college level as executive member during first year and now as a core member.
- **Sahyog: The Mentorship club** (*Teaching Cell, NIT Raipur*): Working as a core mentor for first and second year students. Sahyog provides every possible help and direction to the students of our college for building their career.
- **PRMC: Branch Student Representative:** PRMC- Public and Media Relations cell: Collecting, reporting and spreading the various news organized in and by our department in specified format.

Certificates

OCT. 2018: Deep Learning A to Z(Udemy Course Certificate).
OCT. 2018: Certificate of Completion of Drishti online exam.
SEP. 2018: Certificate of Participation in IICDC 2018 Challenge.
MAY. 2018: Deep Learning Specialization (Coursera Course Certificate) - deeplearning.ai
FEB. 2018: Machine Learning (Coursera Course Certificate) - Stanford University
DEC. 2018: Machine Learning (Short Term Training Program Participation Certificate) - NIT Raipur
OCT. 2017: Introduction to Python for Data Science - DataCamp certificate

Soft Skills

LANGUAGES: English - Professional Fluency
Hindi - Fluent
Sindhi - Mother Tongue

Interests and Activities

Interests: Machine Learning, Deep Learning, Image Processing, Computer Vision, NLP, Mathematics
Activities: Reading, Animation, Chess, Badminton, Travelling.