

## PERSONAL INFORMATION



## Dhiraj Neupane

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<https://scholar.google.com/citations?user=KtSkA68AAAAJ&hl=en>

<https://www.neupanedhiraj.com.np/>

Gender Male | Date of birth 30/04/1995 | Nationality Nepalese

## PERSONAL STATEMENT

- I am a highly energetic and self-motivated person possessing a go-getter attitude with a demonstrated history of working in IT and finance companies, and the university research center.
- Strong engineering professional skilled in machine learning and deep learning, image processing and computer vision, big data analysis, and intelligent fault detection
- I am looking forward to suitable and exciting career opportunities to contribute maximum with my skills and knowledge and create a solid base for my career.

## WORK EXPERIENCE

01 Sept 2021 – Present

## Researcher

IPCamp, Jinju-Si (South Korea)

- Object detection algorithm for Disability Badge Holders' Parking Management System
- Development of face recognition and safety products detection system
- Working with Computer Vision, Object Detection, Deep Learning, IP Camera, LED Modules, LED Matrix Board, Arduino
- Troubleshooting and solving the technical problems

04 Mar 2019 – 21 Feb 2021

## Graduate Research Assistant

Changwon National University, Changwon-Si (South Korea)

- Carry out ML and DL related project experiments
- Prepare technical documentation and write research papers
- Mentor undergraduate students project activities
- Manage lab resource

22 Apr 2018 – 12 Feb 2019

## Operation Assistant

Nepal Electronic Payment Systems Limited, Kathmandu (Nepal)

- ATM and PoS testing and monitoring
- Testing all the possible issues before the ATM or PoS service was established
- Working in Putty and SSH
- Transactions monitoring, troubleshooting the technical problems and solving them

17 Oct 2016 – 13 Apr 2018

## Secondary-Level School Teacher

Shree Marigold Academy Vidhya Mandir, Kailali (Nepal)

- Full-time teacher for secondary level Mathematics, Science and Computer Science subjects

15 Aug 2016 – 04 Sept 2016

## Internship

Subisu Cablenet Pvt. Ltd., Baluwatar, Kathmandu (Nepal)

## EDUCATION AND TRAINING

- Mar 2019 – Feb 2021 **M.S. in Information and Communication Engineering**  
Changwon National University, Changwon-Si (South Korea)
- **Courses:** Database Design, Deep Learning, Digital Signal Processing, Advanced Artificial Intelligence, Web Mining, Advanced Information Visualization, Advanced Mobile Communications for Offshore Plant, and Advanced Multimedia Communication
  - **Full Scholarship and Graduate Research Assistantship**
- Aug 2012 – Aug 2016 **Bachelors in Electrical and Electronics Engineering**  
Kathmandu University, Dhulikhel, Kavere (Nepal)
- **Major Courses:** C, C++, Wireless Communication, Satellite Communication, Digital Signal Processing, Statistics, Signal and Systems, Mobile Communication, Optical Communication, Economics, Engineering Management, Entrepreneurship
- July 2010 – June 2012 **Higher Secondary Education (10+2)**  
St. Xavier's College, Maitighar, Kathmandu (Nepal)
- **Courses:** Physics, Chemistry, Mathematics
- 2009/10 **School Leaving Certificate (SLC)**  
Mount Saipal International Academy, Tikapur, Kailali (Nepal)
- [Batch Topper]

## WORKSHOPS AND CONFERENCES

- 21-23 October 2020 **ICTC2020- International Conference on ICT Convergence**  
Jeju, South Korea

## GRANTS AND ACHIEVEMENTS

- 2019-2021 **Full Scholarship student**  
Changwon National University, South Korea
- 2019-2021 **Graduate Research Assistantship**  
Department of Information and Communication Engineering, Changwon National University, South Korea
- 2021 **Higher Distinction in MS degree**
- 2019 **Sejong University Industry-Academic Cooperation Grant**  
Sejong University, South Korea
- 2010 **School Topper in National-Level SLC (School Leaving Certificate) Exam**

## LANGUAGE PROFICIENCY TEST

- 19 May 2022 **Pearson Test of English (PTE)**  
Overall: 68    Listening: 71    Reading: 63    Speaking: 60    Writing: 75

## PERSONAL SKILLS

- Mother Tongue(s) **Nepali**

Foreign Language(s)	English [Proficient User] Hindi [Proficient User] Korean [Basic User]
Computer Skills	<ul style="list-style-type: none"> <li>➤ <b>Programming:</b> Python, MATLAB, C#</li> <li>➤ <b>Application Software:</b> MS-Office, LaTeX, Arduino, Simulink, MULTISIM, Putty</li> <li>➤ <b>Operating System:</b> Windows, Linux</li> <li>➤ <b>IDE:</b> Jupyter notebook, Spyder, PyCharm, Visual Studio</li> <li>➤ <b>Python Libraries:</b> Keras, Tensorflow, OpenCV, Pandas, NumPy, Scikit-learn, Matplotlib</li> <li>➤ <b>Familiar With:</b> C/C++, Java, Android Studio, MacOS, MySQL, PyTorch</li> </ul>
Additional Skills	<ul style="list-style-type: none"> <li>➤ Strong interpersonal skills and ability to deal effectively in a team environment</li> <li>➤ Skill in organizing resources and establishing priorities</li> <li>➤ A good Analyst</li> <li>➤ Developed the ability to produce reports and presentations of a professional standard</li> <li>➤ Punctual, confident, attentive to details, organized, cooperative, patient, analytical, logical, and a problem-solver</li> </ul>

## ORGANIZATIONAL AND MANAGERIAL SKILLS

2015 – 2016	President of Society of Electrical and Electronics Engineers (SEEE), Kathmandu University
2014 – 2015	Joint- Secretary of Amnesty International Kathmandu University Youth Network (AIKUYN)
2013 – 2014	Executive Member of Amnesty International Kathmandu University Youth

## ADDITIONAL INFORMATION

Projects Undertaken	<p><b>Graduate Projects:</b></p> <ul style="list-style-type: none"> <li>▪ Machinery Fault Detection using Switchable Normalization-based CNN (SN-CNN) [2020 - 21]</li> <li>▪ Machinery Fault Detection using Deep Learning (1-D CNN and 2-D Illustration of Time-Sequence) [2020]</li> <li>▪ Sonar Target Detection using CNN [2019]</li> <li>▪ Face Recognition using Multi-Task CNN [2019]</li> </ul> <p><b>Undergraduate Projects:</b></p> <ul style="list-style-type: none"> <li>▪ Performance Analysis of Multi-Mode Fiber (MMF) [2016]</li> <li>▪ Microcontroller-based Token Number with Announcement and Wireless Display [2015]</li> <li>▪ Design and Fabrication of Digital Tachometer [2014]</li> <li>▪ Design and Fabrication of Clap Controlled Switch [2013]</li> </ul>
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## Publications

**Journal and Conference Papers:**

- "Bearing Fault Diagnosis and Detection using Case Western Reserve University Dataset with Deep Learning Approaches: A Review" [Published in IEEE Access; DOI: [10.1109/ACCESS.2020.2990528](https://doi.org/10.1109/ACCESS.2020.2990528) ]
- A Review on Deep Learning-Based Approaches for Automatic Sonar Target Recognition" [Published in Electronics; DOI: [10.3390/electronics9111972](https://doi.org/10.3390/electronics9111972)]
- "Bearing Fault Detection Using Scalogram and Switchable Normalization-Based CNN" [Published in IEEE Access; DOI: [10.1109/ACCESS.2021.3089698](https://doi.org/10.1109/ACCESS.2021.3089698)]
- "CNN-Based Fault Detection for Smart Manufacturing" [published in Applied Sciences DOI: [doi.org/10.3390/app112411732](https://doi.org/10.3390/app112411732)]
- "Deep Learning-Based Bearing Fault Detection Using 2-D Illustration of Time Sequence" published in ICTC2020- International Conference on ICT Convergence 2020 DOI: [10.1109/ICTC49870.2020.9289232](https://doi.org/10.1109/ICTC49870.2020.9289232)]

## Certificates

- Course completion certificate for completing the course "Research ethics for graduate students (Science and Engineering)" taken by Korea Institute of Human Resources Development in Science & Technology on 12 April 2020.
- Certificate of Reviewing awarded by Applied Soft Computing Journal in the recognition of the review contributed to the journal.
- Course completion certificate for completing the course "Introduction to Computer Vision and Image Processing" by Coursera on March 3, 2022.

## Field of Interest

Machine Learning and Deep Learning, Intelligent fault diagnosis, Object detection and Classification, Sonar target detection, Big Data, Computer Vision

## Personal Interest

Trekking and Traveling, Stock Market, Literature, Music

## REFERENCES

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