

# Nitin Tyagi

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## OBJECTIVE

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As a Ph.D. scholar at the Machine Vision Lab, IIT Roorkee, India, under the supervision of Prof. Balasubramanian Raman, I am enthusiastic about discussing solutions and learning soft skills related to tech ideas. My research interests lie in utilizing deep learning-based techniques for hyperspectral imaging in food and agriculture. I am currently seeking a collaboration opportunity with a research lab working in the food and agriculture domain, which is committed to creating innovative solutions for real-world challenges. Such a collaboration would not only enhance my skills and experience but also facilitate my professional growth.

## EDUCATION

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| Ph.D., Computer Science & Engineering (pursuing)   | Dec 2019 onwards |
| Indian Institute of Technology, Roorkee, Uttarakhand, India.   |                  |
| Thesis Title: <i>Studies on Varietal Classification of Seeds using Hyperspectral Imaging Technique</i> |                  |
| Supervisor: Prof. Balasubramanian Raman  |                  |
| Co-Supervisor: Dr. Neerja Garg   |                  |
| M.Tech., Computer Science & Application  | 2014             |
| Thapar University Patiala, Punjab, India.  |                  |
| MCA  | 2009             |
| MMICT&BM Mullana Ambala ( affiliated from Kurkshetra University, Haryana) India.                       |                  |
| B.Sc.(H) Chemistry   | 2004             |
| A.R.S.D College, University of Delhi, Delhi, India.  |                  |

## PROFESSIONAL EXPERIENCE

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1. Worked as an Assistant Professor at Kalka Institute for Research and Advanced Studies(KIRAS), affiliated with G.G.S.I.P. University, Delhi. 2014-2017
2. Worked as an Assistant Professor at Kalka Institute for Research and Advanced Studies(KIRAS), affiliated from G.G.S.I.P. University, Delhi 2011-2012
3. Worked as an Assistant Professor at Delhi institute of Rural Development (DIRD) College, affiliated from G.G.S.I.P. University, Delhi 2010-2011

## RESEARCH INTERESTS

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- Hyperspectral Imaging
- Deep Learning
- Machine Learning
- Soft Computing
- Evolutionary Algorithms
- Image Captioning

## PUBLICATIONS

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1. Sachin Tyagi, V.S. Pandey, Himanshu B. Baskey, Nitin Tyagi, Avesh Garg, Shivanshu Goel, Trilok Chand Shami, RADAR absorption study of  $BaFe_{12}O_{19}/ZnFe_2O_4/CNTs$  nanocomposite, Journal of Alloys and Compounds, 731 584-590 (2018) [Published]
2. Nitin Tyagi, Balasubramanian Raman and Neerja Garg, Varietal Classification of Wheat Seeds using Hyperspectral Imaging Technique and Machine Learning Models, Accepted for publication in 7th International Conference on Computer Vision Image Processing (CVIP 2022), November 04-06, 2022, VNIT Nagpur Maharashtra, INDIA [Accepted]
3. Nitin Tyagi, Balasubramanian Raman and Neerja Garg, Classification of Hard and Soft Wheat species using Hyperspectral Imaging Technique and Machine Learning Models, Communicated for publication in IEEE International Conference on Image Processing (ICIP 2023), October 08-11, 2023, Kuala Lumpur, Malaysia [Communicated]

## AWARDS & SCHOLARSHIPS

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1. Registration support from the Microsoft Research Grant from the Department of Computer Science and Engineering IIT Roorkee to present a research paper in 7th International Conference on Computer Vision Image Processing (CVIP 2022), November 04-06, 2022, VNIT Nagpur Maharashtra, INDIA
2. Awarded MHRD fellowship for pursuing Ph.D at IIT Roorkee
3. Qualified GATE 2012
4. Awarded GATE fellowship during M.Tech in Computer Science and Engineering Department at Thapar University, Patiala, Punjab
5. Won zonal tournament of volley ball in 1995-96 with first position.
6. Won inter zonal tournament of volley ball in 1995-96 with first position.
7. Won zonal tournament of volley ball 1996-97 with first position.
8. Won inter zonal tournament of volley ball 1996-97 with first position.

9. Participate in v mini National Volley Ball championship at Barasat stadium (West Bengal) in December 1996

10. NCC Certificate.

## TECHNICAL SKILLS

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Programming Languages : C/C++ (proficient), Python (proficient),

Core Java (acquainted)

Development Tools : MATLAB, PyTorch, Anaconda, PyCharm, Spyder, Eclipse, Visual Studio Code, Keras, Tensorflow.

## OTHER PROJECTS

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- Development and Implementation of Algorithm to Remove Back to Front Interference in Historical Stained Documents.
- Image Segmentation using DBSCAN(Density-based spatial clustering of applications with noise) Algorithm in Java.

## WORKSHOP/TRAINING/CONFERENCES ATTENDED

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1. Participated in National workshop on LEVERAGING TECHNOLOGIES USING ERP AND OPEN SOURCE TECHNOLOGY organized by Technia Institute of Advanced Studies, Rohini Delhi
2. Participated in workshop on EMERGING TRENDS IN INFORMATION TECHNOLOGY organized by DIRD college, Delhi

## TALKS/WORKSHOPS DELIVERED

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1. Conducted a training session on ‘Implementation of Machine Learning Models’, in Executive Certificate Program in AI Strategy for Leaders, iHUB DivyaSampark, TIH, IIT Roorkee with The Economic Times, India (Virtual), July 2022.

## PERSONAL DETAILS

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Father’s Name : Late Nardev Singh      Mother’s Name : Yashoda Devi

Date of Birth : Jan 13, 1983      Martial Status : Married

Nationality : Indian

Permanent Address: B-3795 Street No 102, Sant Nagar, Burari, Delhi 110084.

## DECLARATION

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I hereby state that all the information mentioned above is true to the best of my knowledge and I shall be held responsible for any discrepancy found later.

Date: March 31, 2023

Place: Roorkee, Uttrakhand.

Nitin Tyagi

## REFERENCES

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**Prof. R. Balasubramanian**

Professor, CSE Department, Indian Institute of Technology, Roorkee, India.

E-mail: bala@cs.iitr.ac.in

**Dr. Neerja Garg**

Principal Scientist, Imaging, Avionics, and Display Systems (IADS), CSIR-CSIO, Chandigarh India.

E-mail: neerjamittal@csio.res.in

**Dr. Sachin Tyagi**

Principal Scientist, Manufacturing Science and Instrumentation (MSI), CSIR-CSIO, Chandigarh India.

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