

# RADHIKA DUA

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## OBJECTIVE

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To solve the unsolved problems, to do research with special interest in Image Processing, Computer Vision, Machine Learning and Deep Learning.

## EDUCATION

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**University Institute of Engineering and Technology, Panjab University** *August 2015-2019*  
B.Tech in Information Technology *GPA: 9.17/10*

**St. Ann's Senior Secondary School, Roorkee, Uttarakhand** *2014-2015*  
Twelfth Standard(CBSE) *Aggregate: 90.2%*

**St. Ann's Senior Secondary School, Roorkee, Uttarakhand** *2012-2013*  
Tenth Standard(CBSE) *CGPA: 10/10*

## INTERNSHIP

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**Celestini project India** *Jun - Aug 2018*  
Summer intern in **Samsung IOT lab** in IIT Delhi for **Celestini project India**, a two-phase project led by **Dr. Aakanksha Chowdhery** (Princeton University and 2012 Marconi Society Young Scholar) and **Prof. Brejesh Lall** (IIT Delhi) as directors.

**IIT Hyderabad** *Jan - May 2019*  
Working on **Visual Commonsense Reasoning** under **Dr Vineeth N Balasubramanian** at Indian Institute of Technology, Hyderabad

**Variance.ai** *Jun-Jul 2017*  
Summer intern in **variance.ai** in IIIT Hyderabad

## ACADEMIC ACHIEVEMENTS

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- Awarded Second prize in **Celestini Project India** sponsored by **Marconi Society**
- Awarded the **Grace Hopper Celebration India (GHCI)** 2018 Student Scholarship
- Selected in **ET Campus Stars** Class 2018-19, India's 91 brightest engineers
- Secured First Position in IT Dept, B.Tech First Year, 2015-2016
- Secured Third position in IT Dept, B.Tech Second Year, 2016-2017
- Got second prize in **HACK IN THE NORTH** 2017 (largest student hackathon in India)
- Got third prize in **HACK INFINITY** 2017
- Got 6th position in Grand Finale of **India Hacks** 2017 Hackathon
- Speaker at **Software Freedom Day 2017**, Panjab University
- Mentor at **Hacksprint** version2

## PROJECTS

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**Air Pollution Prediction:***June-September, 2018*

A method is proposed to predict the air quality of next 24 hours by predicting the concentration of different air pollutants including sulphur dioxide, nitrogen dioxide, particulate matter for Delhi. Also the major pollutant is determined, which is used to find the source of pollution at different instants of time.

**Squeeze-and-Excitation Networks***September, 2018*

Implementation of SE-Resnet in keras.

Link: <https://github.com/Radhikadua123/SE-Resnet>

**Neural style transfer:***February, 2018*

Style transfer is the technique of recomposing images in the style of other images.

**Breathing Rate using camera:***August, 2017*

This is a code written in both Matlab and python based on Eulerian video magnification algorithm. It is computer vision project in which using the camera which can be web camera or mobile camera, the breathing rate of the person can be determined.

Link: <https://github.com/Radhikadua123/breathing-rate>

**Face recognition:***July 2017*

This is a code written in matlab. It is a computer vision project in which the person is matched from the different pictures of the person and other people in different poses and finds the best match.

Link: <https://github.com/Radhikadua123/Face-recognition>

**Automated irrigation, pests and diseases detection:***November 2017*

This project aims in providing an optimal solution for irrigation. Designed and implemented automated irrigation using Blaney-Criddle Method using Indian Space Research Organization datasets. Predicted pests and diseases using neural networks with temperature, humidity and rainfall as inputs. Validated pests and diseases detection using Convolution neural networks.

Link of web page: <https://sites.google.com/view/uiet-hackinfinity/project-description?authuser=0>

**Aid For Blind:***March 2017*

This is a simple web app which will assist a blind about the view in front of him and accordingly he will be able to take decisions about his motion. This web app will provide a blind person all the conveniences in order to use this app because the communication will be mostly through the speech eliminating the issues of reading or writing. *github link of repository:* <https://github.com/Kritika4sharma/HINT2017>

**Pulse rate:***August 2017*

This is a code written in python. It is a computer vision project implemented using Eulerian video magnification which on the basis of subtle color changes on the forehead determines the pulse rate of the person.

**Automatic Light system for homes:***August 2017*

To switch on electrical appliances automatically when a person enters the room and when there is no person in the room, the electrical appliances are switched off. Arduino, relay and PIR sensors are used in it.

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**OPEN SOURCE****Open Source Contribution:**

Contributed to Open Source Organization GNOME. Projects for which I reported and fixed bugs includes Gnome-web, Gnome-usage, Gnome-games, Shared-mime info.

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**TECHNICAL STRENGTHS****Programming Languages**

C++, C, Python, CSS, HTML, Matlab, TeX

**Technologies and Frameworks**

Linux, Git, openCV, Vala, GTK+ TensorFlow, Keras

**Business skills**

Presentation and Leadership skills.

## LINKS

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<b>Gitlab</b>	<a href="https://gitlab.gnome.org/radhika">https://gitlab.gnome.org/radhika</a>
<b>Github</b>	<a href="https://github.com/Radhikadua123">https://github.com/Radhikadua123</a>
<b>Linkedin</b>	<a href="https://www.linkedin.com/in/radhika-dua-6105a9111">https://www.linkedin.com/in/radhika-dua-6105a9111</a>
<b>Spoj</b>	<a href="https://www.spoj.com/users/radhika_123">https://www.spoj.com/users/radhika_123</a>
<b>HackerEarth</b>	<a href="https://www.hackerearth.com/@radhika51">https://www.hackerearth.com/@radhika51</a>
<b>Bitbucket</b>	<a href="https://bitbucket.org/radhikadua123/">https://bitbucket.org/radhikadua123/</a>

## SELECTED COURSE WORK

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Data Structures, Algorithms, Operating Systems, Digital Image Processing, Database Management Systems, Automata, Computer Graphics, Multimedia.

**Neural Networks and Deep Learning** by deeplearning.ai on Coursera.

**Convolutional Neural Networks** by deeplearning.ai on Coursera.

## POSITION OF RESPONSIBILITY

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**Campus Ambassador program by GeeksforGeeks(2017-2018)**

*Fellow Campus Ambassador in Campus Geek Ambassador program by GeeksforGeeks*

**Codechef Campus chapter UIET(2016-2017)**

*Speaker at codechef campus chapter UIET*