# ROHAN GARG

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#### **EDUCATION**

# Indian Institute of Technology Roorkee

B.Tech in Production and Industrial Engineering

#### RPS Public School, Rewari

Higher Secondary Certificate, Central Board of Secondary Education

Jun 2018 - Apr 2020

CGPA: 7.56/10.00

# Percentage: 94.4%

#### RESEARCH INTERESTS

Deep Learning | Computer Vision | Generative Models | Pure Mathematics | Cryptography

#### TECHNICAL SKILLS

Pytorch(intermediate) | Hugging face library(intermediate) | Tensorflow(beginner) | Python | C++

#### **PROJECTS**

**DeepDreams** Aug 2021 - Sept 2021

- Worked on an algorithm DeepDreams, which is used to visualize the patterns as perceived by different layers of a neural network.
- Developed an implementation of DeepDreams algorithm in PyTorch by using pretrained VGG-19 neural network. Code

#### **Pathological Classification**

IIT Roorkee

Vision and Language Group

Apr 2021 - May 2021

- Developed a Deep Learning Classification model to detect retinal diseases from optical coherence tomography (OCT) X-ray images.
- Applied Transfer Learning by utilizing pretrained ResNet50 in the model to improve accuracy and reduce training time.
- Also identified the ROI (Region of Interest) in the images which is responsible for classifying the images in one of the four diseases. [Code]

# Literature Summary Repository

Aug 2021 - Aug 2021

- Contributed to a GitHub repository, maintained by Vision and Language Group containing summaries of research papers from various popular ML conferences.
- Summarized research papers from conferences like ICLR and CVPR.

[Code]

# Spherico-Intel Gyrobot

IIT Roorkee

Cognizanace 2021, IIT Roorkee Technical Fest

Feb 2021 - Apr 2021

- Designed a Solidworks model of a spherical Gyrobot capable of moving in any direction and transport small objects at short distances.
- Designed the Gyrobot's mechanical design and its interior motion mechanisms.

#### HONORS AND AWARDS

# 2020 | **JEE (Advanced) 2020**

All India Rank 5167 out of 250,000 students (top 2%) in JEE Advanced 2020, for my admission at IIT Roorkee.

# 2018 | **HScTss Scholar (2018)**

Haryana State Talent Search Scheme Scholarship awarded Haryana State Government to students with a scientifically oriented mind.

#### MOOC'S AND COURSES

| Machine Learning                                       | Coursera    |
|--|-------------|
| Intro to Deep Learning with PyTorch                    | Udacity     |
| Deep Learning Specialization                           | Coursera    |
| CNNs for Visual Recognition(CS231n)                    | Stanford    |
| Natural Language Processing with Deep Learning(CS224n) | Stanford    |
| Probability and Statistics                             | IIT Roorkee |
| Multi-Task and Meta-Learning(CS230)                    | Stanford    |
| Introduction to Reinforcement Learning by David Silver | DeepMind    |

#### COLLEGE ENGAGEMENTS

#### Vision and Language Group

 ${\rm May}~2020$  - Present

Core Member

A community of Deep learning enthusiasts that conducts regular discussions and workshops with a
primary focus on research papers and research on a variety of fields like Computer Vision and Natural
Language Processing.

WebLink

Blogs

Jun 2020 - Present

Deep Learning

• I have written a couple of blogs on Medium in the domain of deep learning, of which, one was published on VLG medium space.

Blogs.

# Field Hockey, IIT Roorkee

Jan 2020 - Present

• I represent IIT Roorkee at various sports tournaments as a midfielder in the Institute Field Hockey Team.