

# Jitesh Jain

DEEP LEARNING ENTHUSIAST | SECOND YEAR UNDERGRADUATE | COMPUTER SCIENCE

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*"All progress takes place outside the comfort zone."*

## Summary

A diligent deep learning enthusiast, diving deep into the world of Artificial Intelligence, trying to find solutions to the unanswered problems in the field of AI to help humanity. Familiar with concepts in deep learning, linear algebra, probability and statistics, and computer science fundamentals.

## Education

### Indian Institute of Technology, Roorkee

Roorkee, India

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

2019 - Exp. 2023

- CGPA: 9.316/10

### Central Academy, Kota

Kota, India

GRADE 12 (SENIOR SECONDARY LEVEL)

2019

- Percentage: 96.60%

### Modern Senior Secondary School, Kota

Kota, India

GRADE 10 (SECONDARY LEVEL)

2017

- CGPA: 10/10

## Experience

### SHI Lab @ UO

University of Oregon, Eugene

VISITING STUDENT RESEARCHER

Novemeber, 2020 - Present

- Working with **Prof. Humphrey Shi**.
- Leading a project on Object Level Image Editing.
- Performed a Survey on Semantic Segmentation works. **[Presentation]**
- Conducted Experiments on various backbone networks to evaluate their inference-time performance. **[GitHub]**

### FilterPixel

Remote (Christiana, DE)

ML ENGINEER INTERNSHIP

July, 2020 - September, 2020

- Worked on developing ML/DL models for automating the process of Photo Culling. **[Link]**
- Developed ML models for classifying images based on their exposure, blurriness, etc..
- Worked on integrating the models with the software.
- Setup an automated-retraining pipeline using the Google Cloud Scheduler for weekly re-training of the models with new data.
- **[Letter of Recommendation]**

## Publications

### DEAP Cache: Deep Eviction Admission and Prefetching for Cache

September, 2020

AYUSH MANGAL\* | **JITESH JAIN\*** | KEERAT KAUR GULIANI\* | OMKAR BHALERAO\*

Vision and Language Group, IIT Roorkee

- This is the **first** time an approach has tried learning all the three policies: Admission, Prefetching and Eviction.
- Unlike, previous methods which relied on past statistics for carrying out cache replacement, we predict future statistics (frequency and recency) and then use an online RL-algorithm for eviction.
- **[PrePrint]** **[GitHub]**

## Projects

### PAPERS WE READ

Roorkee, India

CONTRIBUTOR | GITHUB REPOSITORY

May, 2020 - June, 2020

- This is an open source repository maintained by Vision And Language Group containing summaries and analysis of recently published research papers. **[GitHub Link]**
- Contributed to summaries from recent Deep Learning Conferences.
- My summaries can be found on my website. **[Link]**

## ChatBot with Pytorch

IIT Roorkee

SELF-LEARNING PROJECT | VISION AND LANGUAGE GROUP

June 2020

- Implemented a chatbot using pytorch on the Cornell Movie–Dialogs Corpus dataset using GRUs with an Attention mechanism.
- [[GitHub](#)].

## VQ-VAE Implementation in Pytorch

IIT Roorkee

SELF-LEARNING PROJECT | VISION AND LANGUAGE GROUP

May 2020

- Implemented **VQ-VAE** from scratch in Pytorch on the MNIST dataset as a self-learning project.
- Derived conclusions based on the training and testing results regarding the encoding of images into a latent space, adding Vector-Quantization to encodings and generating images.
- [[GitHub](#)].

## Societyfy- Season of Code Project

IIT Roorkee

ANDROID APP DEVELOPER | MOBILE DEVELOPMENT GROUP

December 2019

- Worked on developing an android app- **Societyfy**, during the SoC event organized by **Mobile Development Group**, to help one in finding people around oneself for carrying out activities (eg., study,play,etc.) together.
- Worked with Android Studio (Java) as the development tool.
- [[Playstore Link](#)] [[Github](#)]

## Honours & Achievements

- 2019 **All India Rank - 252**, Joint Entrance Exam (JEE) Advanced is attempted by more than 230,000 students[[Link](#)]
- 2019 **All India Rank - 454**, Joint Entrance Exam (JEE) Main is attempted by more than 1,000,000 students.
- 2018 **KVPY Fellowship Holder**, KVPY is a highly prestigious National Fellowship awarded by Indian Institute of Science and Government of INDIA to students who show high aptitude in research. [[Link](#)]
- 2017 **NTSE Scholarship Awardee**, NTSE is a national level examination for secondary school level to identify and recognize students with high intellect and skills. [[Link](#)]

## Skills

<b>Programming Languages</b>	Python, JAVA, Dart, Swift, C, HTML, CSS, JavaScript
<b>Packages and Environments</b>	Pytorch, TensorFlow, Keras, Android Studio, Flutter, Numpy, Pandas, Matplotlib, Lucent, Sckit-learn, Opencv, Django
<b>Utilities</b>	Git, Linux Shell, Vim
<b>Relevant Courses (online)</b>	Deep Learning Specialization (Coursera), GAN Specialization (Coursera) by DeepLearning.ai CS231n (Computer Vision Course) by Stanford University, CS229 (Machine Learning Course) by Stanford University Stat 110 (Probability and Statistics) by Harvard University,
<b>Relevant Courses (offline)</b>	Mathematics-I (Linear Algebra and Calculus), Optimisation Techniques Discrete Structures, Data Structures and Algorithms

## Extracurricular Activity

### Vision and Language Group, IIT Roorkee

Roorkee, India

CORE MEMBER

January, 2020 - Present

- Core member of VLG, a student group that promotes **Deep Learning research culture** at IITR by discussing relevant research papers, organizing workshops and working on related projects.[[Link](#)]
- Conducted a workshop on **Generative Modelling using GANs** in March 2021. [[Colab Notebook](#)]

### Mobile and Development Group

Roorkee, India

ANDROID APP DEVELOPER

January, 2020 - Present

- Developer at the Mobile Development group based in IIT Roorkee.[[Link](#)]
- Involved in contributing to open-source projects, developing android applications in JAVA and Flutter, etc.

### Geek Gazette, IIT Roorkee

Roorkee, India

GRAPHIC DESIGNER

August, 2019 - Present

- Official Tech Magazine based in IIT Roorkee.[[Link](#)]
- Designing graphics for articles and advertisements for the magazine and the website.