# 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: 9.405/10

**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

**FilterPixel**  *Remote (Christiana, DE)*
ML ENGINNER 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, blurrines, 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.

## 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

**IITR ChatBot**  *IIT Roorkee, India*
PROJECT LEADER | DEVELOPER  *September, 2020 - Present*
- We are developing a chatbot for the IIT Roorkee's website. **[Link]**
- Working with **RASA** framework for developing the contextual chatbot.

**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.
- Implementation link: **seq2seq chatbot**.

### 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 reults regarding the encoding of images into a latent space, adding Vector-Quantization to encodings and generating images.
- Implementation link: **VQ-VAE on MNIST**.

### 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: **Install Societyfy**
- Medium Blog: **Societyfy: An app made for finding company at any time for anything**
- Github link: **[Code]**

## Honours & Achievements

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|---|---|
| 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

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|---|---|
| **Programming Languages** | Python, JAVA, Dart, Swift, C, HTML, CSS, JavaScript |
| **Packages and Environments** | Pytorch, TensorFlow, Keras, Android Studio, Flutter, Numpy, sckit-learn, opencv, django |
| **Utilities** | Git, Linux Shell, Vim |
| **Relevant Courses (online)** | Deep Learning Specialization (Coursera), Stat 110 (Probability and Statistics) by Harvard University CS231n (Computer Vision Course) by Stanford University, CS229 (Machine Learning Course) by Stanford University |
| **Relevant Courses (offline)** | 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]**
- Involved in paper discussions, contributing to projects, organizing workshops,etc.

### 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.