

# Vineet Madan

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## Education

### Indian Institute of Technology Ropar

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

CURRENT C.G.P.A : 9.23/10

Ropar, India

August 2017 - Present

### Central Board of Secondary Education

AISSCE (CLASS 12): 93.6%

AISSE (CLASS 10) C.G.P.A : 10

Chandigarh, India

## Skills

**Programming Languages** C/C++, Python, SQL, Javascript

**Frameworks / Libraries** TensorFlow, Django, RASA NLU

**Softwares / Tools / OS** Git, Linux(Ubuntu)

## Projects

### Satellite Image Segmentation

TensorFlow, Keras, Python

- Used the **U-Net** architecture for segmenting satellite images into seven classes
- Used python packages like **Matplotlib, Numpy, SciPy**
- Trained model over the Tesla K80 GPU on **Google Colab**

### Media Monitor for Railways

Django, Python, Bash, Javascript

- Developed the front and back end for the web portal for monitoring news on the Indian Railways using **Django**
- Developed the database API(s) using django-tastypie
- Wrote a bash script for integrating and running the various components of the project
- Won at the **Smart India Hackathon 2019** for this project

### Spam Message Filter

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- Developed a program which classifies text/email messages as spam and not spam
- Used **Levenshtein distance** for measuring distance between strings
- Implemented **K-Means Clustering Algorithm**

### CIFAR-10 Image Classifier

PyTorch, Python

- Developed a basic classifier for the CIFAR-10 dataset using PyTorch

### Service Robot

Django, Raspberry Pi, Python

- Developed a **web controlled robot** that could be deployed in a controlled and localized environment to transport goods
- Based on the line follower model using the Raspberry Pi platform
- Developed the web interface using the **Django** web development framework

### Chatbot

Python, RASA NLU Framework

- The project involves developing a chatbot tailored to the needs of students, professors and administrators in an educational institution
- The project involved the use of the **RASA Natural Language Understanding Framework** and developing a **MySQL** database.

## Relevant Courses

**Computer Science** Deep Learning, Data Structures, Digital Logic Design, Programming Language Pragmatics and Paradigms\*, Computer Architecture\*

**Mathematics** Calculus, Linear Algebra, Discrete Mathematics, Differential Equations, Probability\*

**Biology** Biology for Engineers\*

**Electrical** Signals and Systems

## Positions of Responsibility

### Robotics Club Representative

June 2018 - Present

Conduct tutorial sessions and competitions for juniors and teach them various skills like coding.

### School President

2014 - 2015

Represent over 3000 students of the school and organize various events

## Miscellaneous

**Smart India Hackathon** **Winner** at Smart India Hackathon 2019 edition

**JEE Rank** Secured a rank of **1066** (Out of **1.5 million candidates**) in Joint Entrance Exam, 2017.

**Institute Merit Prize** Among the **Top 7%** students in class for the first three semesters

**Web and App Development Team** Leading the web development team of Advitiya-19, IIT Ropar's Technical Festival

**BAJA Volunteer** Volunteered in the BAJA-SAE India event held in IIT Ropar in March 2018