Vineet **Madan**

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Education

Indian Institute of Technology Ropar *Ropar, India*
B.Tech. in Computer Science and Engineering *August 2017 - Present*
Current C.G.P.A : **9.23/10**

Central Board of Secondary Education *Chandigarh, India*
AISSCE (Class 12): **93.6%** AISSE (Class 10) C.G.P.A : **10**

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**

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.

Image Captioning
- An Image captioning model to provide accurate captions to the Image fed.
- Model architecture involves a CRNN based network where CNN is used to generate feature embeddings for the image and RNN is trained on those feature embeddings to create captions

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 *C*
- 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**

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

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