

# Nikhil Kumar

<http://kumarnikhil.ml>

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## Education

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2015 - Present	Bachelor of Engineering(BE), Information Technology Army Institute of Technology, University of Pune <i>Percentage: 9.48 SGPA</i>
2013-2014	Class XII, CBSE Board, K.V No. 2 Ambala Cantt, Haryana (Physics, Chemistry, Mathematics, Computer Science) <i>Percentage: 88.2%</i>
2011-2012	Class X, CBSE Board, K.V No. 2 Ambala Cantt, Haryana (Science, Mathematics and English) <i>Percentage: 9.2 CGPA</i>

## Projects

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### Feb'18- Feb'18 **X-Ray Scans for Pneumothorax Detection**

- ChestXRay dataset containing X-ray labeled with the diagnosis for Pneumothorax was used for training and testing the model.
- Class Map Activation technique is used which generates “heatmaps” targeting the regions of the image to which model pays attention in the last layer.

### Dec'17- Dec'17 **Generate your track with RNNs**

- A recurrent neural network model was trained on dataset created using the MIDI music toolkit
- The model built successfully captures the long term dependencies in musical notes

### Jan'17- Jan'17 **Sentiment Classification with Sequence Models**

- To improve upon the simple feed forward model for classification tasks, we used represented a tweet as a sequence of words
- A model using LSTM cells and in the end there is one fully connected layer which outputs the probability for the tweet to be positive

### Nov'16- Nov'16 **MLP for sentiment Analysis**

- Collected tweet data using twitter REST API on trending #hashtags
- A neural network with two hidden layer was implemented from scratch with three output classes for “Positive”, “Neutral “ and “Negative”

## Certifications and Courses

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- Fast.ai Part1v2 International Fellowship for the course at The Data Science Institute | University of San Francisco (Oct 17-Dec 17)
- Deep learning specialization from coursera.com | deeplearning.ai
- Machine learning from coursera.com
- Natural Language Processing from NPTEL | IIT Kharagpur
- Summer School on Natural Language Processing and Machine learning organized by ACM India at IIT Kharagpur (1<sup>st</sup> June'17 – 21<sup>st</sup> June'17 )

## Technical Skills

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Programming Languages: Python, C, C++, R, HTML, CSS, JavaScript, Shell scripting, MATLAB, Latex

Frameworks/ Tools: TensorFlow, Keras, PyTorch, NodeJs, Django

Databases: SQL, MongoDB

Operating System: Linux, Windows

Others: Jupyter Notebook, Atom Editor, AWS

## Scholarships and Achievements

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- Runner up in 'Amalgam' project competition sponsored by alumnus of AIT, 2017
- Runner up in Hackathon "Innervive'17" organized in, AIT Pune
- 2nd position in 'Code-Red' Annual inter college coding competition, AIT Pune, 2016

## Extra-Curricular

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- Student member of Computer Society of India and IEEE
- AI Geek Leader at AI Saturdays
- Board member of Cultural Board and writer in college magazine 'Srijna'
- Started AIT Machine Learning group – Tutored juniors
- Participate in Kaggle competitions
- Hobbies include Squash | Swimming
- Hosted events and invited researchers from IISC and IIT for lectures.
- Active member of AIT Open Source Software (OSS) group
- Member of Pune University Squash team