

# Ishita Ankit

<https://iankit25.github.io/>

I01, Cliffsides Apts. Sunderland, MA 01375

Email : [iankit@umass.edu](mailto:iankit@umass.edu)

Mobile : +1-413-800-9386

## EDUCATION

### University of Massachusetts, Amherst, MA

Sep 2017 - Jun 2019

*Master of Science in Computer Science*

*GPA: 4.0/4.0*

### Indian Institute of Technology, Kanpur(IITK), India

Jul 2013 - Jul 2017

*Bachelor of Science in Mathematics & Scientific Computing*

*GPA: 8.1/10*

*Minor: Artificial Intelligence*

## RELEVANT COURSES

Probability & Stochastic Processes

Data Structures & Algorithms

Deep Learning

Machine Learning Tools and Techniques

Advances in Computer Vision

Reinforcement Learning

Advanced NLP(ongoing)

Time Series Analysis

Motion Planning

## INTERNSHIPS AND PROJECTS

### Multi-Task Learning through Cross-Stitch Networks

Sep 2017 - Dec 2017

*Prof. Erik Learned Miller, CICS, UMASS*

- Used cross-stitch networks trained on loosely related tasks through sharing parameters between the two networks.
- Implemented the architecture for two tasks: NLP- chunking with POS tagging as the auxiliary task on OntoNotes Dataset and Vision-Face Landmark Detection using attribute recognition as the auxiliary task on MTFD Dataset.
- Showed results with increase in accuracy as compared to that achieved by network trained for a single task.

### Descriptive Image Captioning and Video Captioning

Jul 2016 - Dec 2016

*Prof. V. Nambodiri, Prof. Gaurav Sharma, CSE, IITK*

- Replicated the **Torch** implementation results of Dense Captioning model to obtain region- specific captions; used Stanford Parser to extract root words for topic basis clustering and fed them into an encoder- decoder model trained to generate sentences from phrases obtaining meaningful paragraphs.
- Implemented the State-of-the-art model of Sequence to Sequence-Video to Text in **Caffe** and used audio features to improve the confidence in activity prediction; combined the Deep Compositional Captioning model to use language model trained on DBpedia with the aim to reduce dependency on annotated dataset.

### Predicting User Relevant Advertisement

May 2016 - Jul 2016

*InMobi, Bangalore, India, Data Scientist Intern*

- Analyzed data containing app usage history to obtain user specific pattern in the app preferences.
- Grouped users with similar features using k-means, agglomerative Mean-Shift and Markov models in **Python**.
- Trained SVM, decision trees & Random Forest to predict user specific ads based on maximum click through rates.

### Demand Pool Analyzer (DPA)

May 2016 - Jul 2016

*InMobi, Bangalore, India, Software Intern*

- Built an Analytical Engine to get insight into Supply-Demand Matching for real time debugging.
- Implemented a tomcat based web app in **Java** backed by **Elastic Search** for efficient querying & aggregating data.
- Received real time feedback using **Kafka** which provided filtered data for analysis from serving systems.

### Pedestrian and Vehicle Classification

Jan 2016 - Apr 2016

*Prof. Harish Karnick, CSE, IITK*

- Incorporated grey-scale, hierarchical HOG, SIFT features for clustering and classification on surveillance videos.
- Experimented with SVM, Random Forest, Adaboost, Convolutional Neural Nets for classification of vehicles and pedestrians using **scikit-learn(Python)** obtaining the highest accuracy of 95.37%.

### Gaussian Processes for Regression

Jan 2016 - Apr 2016

*Prof. Piyush Rai, CSE, IITK*

- Applied Gaussian Processes to forecast forest-fires with an accuracy of 70% using **GPML MATLAB** library.
- Assumed a bell-curve prior with zero mean and squared exponential covariance over the predicting function and used Bayes Theorem to obtain a posterior(which is also a Gaussian Distribution) for forecasting.

## PROGRAMMING SKILLS

**Languages:** C, C++, Java, Python, MATLAB, R, HTML5

**Libraries:** TensorFlow, Scikit learn, OpenCV