

# Suryateja B.V.

Senior Undergraduate, IIT Kanpur

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## EDUCATION

BTech, Electrical Engineering  
Minor, Machine Learning  
IIT Kanpur, 2020 (expected)  
CPI : **9.52** / 10 (after 7 semesters)

Telangana Board - Class XII  
Sri Chaitanya Junior College, Hyderabad, 2016  
Percentage : 98.6%

CBSE - Class X  
Vidyani Ketan Public School, Bengaluru, 2014  
CPI : 10 / 10

## WORK EXPERIENCE

### Research Intern, Adobe Research, Bengaluru

Supervised by Balaji Vasan and Gaurav Verma; May 2019 - July 2019

- Designed an end-to-end assistive application that generates coordinated image-text fragments from an input article to satisfy target user needs
- Used recent deep learning models such as WGAN-GP, VSEPP, DenseCap, FastPhotoStyle, etc. to aid in causal modeling of perceptual attributes and need-based retrieval of relevant fragments
- Full paper accepted at **ACM IUI'20**
- Received a Pre-Placement Offer from the Research Team

### Research Intern, University of Texas at Dallas (remote)

Supervised by Prof. Vibhav Gogate; May 2018 - July 2018

- Learned chow-liu features as a prior network on NLCS dataset by computing mutual information weighted graph and constructing a maximal spanning tree
- Used soft parameter tying to bias structure towards sparsity

## PROJECTS

### Advances in Recommender Systems, Course Project

Supervised by Prof. Piyush Rai; Jan 2019 - April 2019; [Presentation](#)

- Modeled user-exposure and incorporated item-item co-occurrence matrix to learn robust embeddings
- Explored ways to tackle cold-start and incorporate fairness using constrained multi-arm bandits

### Explainable Machine Learning, Course Project

Supervised by Prof. Piyush Rai; July 2018 - Nov 2018; [Presentation](#)

- Create neuron groups using non-negative matrix factorization to visualize InceptionV2 features
- Compared the features of original and adversarial images generated using  $L_\infty$ -BFGS method

### Stock Market Prediction, Credit Suisse ML Hackathon

Supervised by Prof. Sandeep Shukla; May 2018 - June 2018; [Presentation](#)

- Feature engineered historical stock data listed in NSE and implemented time-series LSTM in Keras to predict top 50 performing stocks of the next day
- Part of a three-member team that secured **third place** in National Finals among top 15 teams

### SongTrain, code.fun.do Hackathon, Microsoft

Mar 2017 - May 2017; [Demo Video](#)

- Developed a Django-based web application that generates karaoke of uploaded songs and assesses the user's singing abilities by plotting and comparing realtime frequency graphs
- Part of a three-member team that secured **first place** in National Finals among 37 teams from top 15 IITs

## ACADEMICS

### Teaching Assistant

CS202: Mathematical Logic

CS203: Probability; 2020-current

### Academic Excellence Award

Among 850 students; 2016-18

**AIR 2369**, JEE Advanced 2016

Among 1.5 lakh students; June 2016

**AIR 166**, JEE Mains 2016

Among 15 lakh students; May 2016

## SKILLS

C, C++, Python, JavaScript, Keras, Django, Shell Utilities, R, Git

## VOLUNTEERING

### Member, Core Team Guidance

Counselling Service; 2018-19

### Secretary

Programming Club; 2017-18

### Academic Mentor (Maths)

Counselling Service; 2017-18

## OTHER PROJECTS

### Time-series Clustering, [Code](#) and [Report](#)

Implemented the mixture of ARMA model in Python and selected parameters using BIC

### Pulse Oximetry, [Presentation](#)

Build a heart rate monitor using Arduino Nano

### Exoplanet Detection, [Code](#) and [Report](#)

Detecting exoplanet containing stars in highly imbalanced Kepler Light Curve data

### Technical Dialog Chatbot, [Demo Video](#)

A retrieval-based, short conversation, closed domain chatbot using Dual Encoder LSTM network