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## Education

### Mumbai, India

- B.E. in Computer Engineering, University of Mumbai. **CGPA:** 8.91 / 10 **(Class of 2016)**
- Higher Secondary Certificate (HSC), Maharashtra Board. **Percentage:** 83.33% **(Class of 2012)**
- Secondary School Certificate (HSC), Maharashtra Board. **Percentage:** 94.00% **(Class of 2010)**

### Undergraduate thesis

**July 2015 - April 2016**

Action Based Cognition: Embodied Cognitive Robotics

*Guides: Dr. Nagarjuna G (TIFR), Prof. Brijmohan Daga*

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## Employment

### Research Intern

**Virginia Tech, USA**

**July 2016 - July 2017 (Expected)**

*Machine Learning and Perception Lab, Dr. Dhruv Batra*

- (Joint) First author, **CVPR '17** Submission-  
*Making the V in VQA Matter: Elevating the Role of Image Understanding in Visual Question Answering*
- Organizing team, **CVPR '17** Workshop- **Visual Question Answering (VQA) Challenge 2017**
- Teaching Assistant for *Introduction to Machine Learning* taught by Dr. Stefan Lee
- Improving the evaluation time of results on **EvalAI**, a framework to host AI competitions online

### Research Intern

**University of Malaya, Malaysia**

**June 2015 - July 2015**

*Advanced Robotic Lab, Dr. Choo Kiong Loo*

- Worked on emotion classification using attention based deep learning models
- Conducted a two day long deep learning and GPU computing workshop

### Software Development Intern

**Google Summer of Code**

**May 2015 - Aug 2015**

*The OpenCog Foundation, Dr. Ben Goertzel and Yuhuang Hu*

- Implemented the Deep Spatio-Temporal Inference Network (**DeSTIN**) framework using GPUs
- Improved the accuracy of DeSTIN by **21%** using stacked convolutional auto-encoders with variable noise

### Department Editor

**ACM XRDS**

**April 2015 – Present**

- Promoted to the **Hello World** department in July 2016- a column introducing algorithms and software tools
- Previously, wrote for the Pointers column- collection of news relevant to the theme of the magazine issue

### Software Development Intern

**InvenZone, India**

**Dec 2014 - Jan 2015**

- Deployed a model for time series forecasting to determine which scientific research topics are trending
- Built a machine learning model for classifying images of clothing items from e-commerce website's catalog

### Software Development Intern

**Silver Leaf Capital Services, India**

**June 2014 - Aug 2014**

- Developed a model for predicting stock splits with over **94%** accuracy
- Deployed a Stock Portfolio Management Application

### Assistant Director

**Indian International MUN**

**Sept 2012 - Aug 2013**

- Lead the Coordination Council, a team of over 400 students, towards organizing Asia's largest youth conference

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## Honors and Awards

### Sir Ratan Tata Merit Scholarship

Recipient of the Ratan Tata Merit Scholarship by Ratan Tata Trust awarded for excellent academic record in first year of engineering in 2013.

## Presentations and Case Studies

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- A Gentle Introduction to Machine Learning
- Passing the Turing Test - A comparative survey of all attempts, techniques since 1950
- Wavelet Transforms versus Fourier Analysis for digital signal processing
- Case study on memory management in UNIX based operating systems
- Comparative analysis of various multi-level cache coherence techniques
- Visual Cryptography - Storing secret data in images
- Distributed database cache optimization
- Python Programming for Beginners

## Workshops

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- Selected to attend **Deep Learning Summer School 2016**, Montreal, Canada
- Selected to attend, with full scholarship, **Machine Learning Summer School 2015**, Kyoto, Japan
- Selected to attend, with full scholarship, **Lectures on Probability and Stochastic Processes 2015**(LPS-X)
- Selected for **Media Lab Design Innovation Workshop 2015**, Welspun Smart Textiles track
- Selected for **MIT Media Lab's Kumbhathon 2015**, Proactive Crowd Management Team

## Selected Projects

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- **Correlational Neural Network for Knowledge Base Completion** (2016)  
Training on relationships in WordNet and FreeBase, predicting missing knowledge base entries and classifying facts to achieve results comparable to Neural Tensor Networks
- **Hierarchical clustering of images** (2016)  
Performed agglomerative and divisive clustering of images from the Flickr 8K dataset
- **Generating poetry using Recurrent Neural Networks** (2015)  
Using character and word level attention based RNNs to generate unseen poetry
- **BitTorrent Client** (2015)  
Created a heart beat server and tracker server to implement peer file sharing protocol for torrent files
- **XML Database to Relational Database Converter** (2015)  
Built a Java application to parse XML file with XSD and generate SQL queries for Relational Databases
- **Singing Curtains** (2015)  
Built flat fabric speakers made out of embroidered highly conductive thread and neodymium magnets
- **Fabric Moisture Sensor** (2015)  
One of its kind fabric moisture sensor which not only detects but also measures wetness of fabric and wirelessly transmits messages indicating moisture content
- **Online Movie Ticket Booking Service** (2014)  
Features included searching via theatres or locality, OTP authentication and reviews from IMDB

## Languages and Technologies

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- Python (Theano, TensorFlow, OpenCV, scikit-learn stack), Lua (torch7), R, MATLAB, Octave, bash
- Apache Spark, Robot Operating System(ROS), Gazebo simulator, Redis, Flask, MySQL, AWS EC2, AWS S3, uWSGI, Nginx, HTML, CSS, Javascript

## Positions Held

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- Founder and Chairperson, Association of Computing Machinery(ACM) Student Chapter (2014-15)
- Event Coordinator, Computer Engineering Students' Association(CESA) (2013-14)
- Event Coordinator, Entrepreneurship Cell(E-Cell) (2013-14)
- College Debate Team Member (2013-15)