

# Yash Sanjay Bhalgat

Curriculum Vitae

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EDUCATION **University of Michigan, Ann Arbor, MI** Dec '18 (expected)  
Masters, Computer Science and Engineering  
• **GPA:** 3.89/4.0

**Indian Institute of Technology, Bombay,** 2013-2017  
B.Tech. with Honors in Electrical Engineering and Minor in Computer Science  
• **GPA:** 9.44/10.0

RELEVANT COURSES Machine Learning, High Performance Scientific Computing, Advanced Computer Vision, Digital Image Processing, Matrix Computations, Design and Analysis of Algorithms, Data Structures and Algorithms, Probability and Data Analysis, Microarchitecture, Complex Analysis, Calculus

## Experience

TECHNICAL SKILLS • **Languages:** (proficiency: high to low) Python, C++, MATLAB, Java, Verilog, R, Julia, Bash  
• **Packages:** PyTorch, Keras, Theano, TensorFlow, OpenCV, CUDA, python-flask, git

WORK EXPERIENCE **IBM Almaden Research Center, Mentor - Zhe Liu** [Jun '18 - Ongoing]  
**Mislabel Identification, Correction and Elimination for sentiment classification**  
Ensemble-based framework to integrate weekly-labelled and high-quality samples for training.

**IBM RESEARCH, Bangalore, Mentor - Vikas Raykar** [Summer '16]  
**Joint multi-modal representations for e-commerce catalog search by visual attributes**  
Fast autoencoder-based ([CorrNets](#)) search on large fashion catalogues without manual tagging.

**TATA RESEARCH DESIGN AND DEVELOPMENT CENTER, Pune** [Dec '15]  
**Object recognition in document images with semisupervised deep learning** [arXiv]  
Work accepted in DAS conference. Stamp detection accuracy 94% and segmentation IoU 74.81%.

**INFURNIA, Mumbai** [Summer '15]  
**Software module development using CAD modelling engine**  
Created a range of constraint-modules by modifying functions in FreeCAD in Python and C++.

**FOCUS ANALYTICS, Mumbai** [Dec '14]  
**Indoor Navigation System - Pedometry**  
Developed a pedometry-based indoor navigation Android application accurate to 1-1.5 meters.

**MARS SOCIETY OF INDIA, IIT Bombay** [Aug '14-Mar '15]  
**Navigation System Design - University Rover Challenge, Utah**  
Built an A-star algorithm for video-guided nav for a semi-autonomous prototype of a Mars rover.

KEY COURSE PROJECTS • **Convolutional Neural Network from scratch**, Advanced Computer Vision [ [github](#) ]  
• **Exploring machine-learning ranking systems on the Yelp dataset**, Information Retrieval  
• **Sarcasm detection in sentences**, Machine Learning (CS 725) [ [github](#) ]  
• **Segmentation of MRI images using Expectation Maximization**, Est. and Identification  
• **Computer Vision and Image Processing algorithms acceleration with CUDA**, High Performance Scientific Computing [ [github](#) ]

SCHOLASTIC ACHIEVEMENTS • All India Rank **12** in IITJEE-Mains exam among 1.5 mil students and AIR 155 in JEE-Advanced  
• All India Rank (AIR) **60** in KVPY Scholarship by Govt. of India among 0.2 million candidates  
• Featured in National Top 30 for the International Astronomy Olympiad, 2013  
• Among top 300 in India to compete in the Physics, Chemistry and Mathematics olympiads.