Yash Sanjay Bhalgat

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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:*** (by proficiency:) Python, C++, MATLAB, Java, Verilog, R, Bash, Julia (basic)
- ***Packages:*** PyTorch, Keras, Theano, TensorFlow, OpenCV, CUDA, python-flask, git

WORK EXPERIENCE

IBM Almaden Research Center, *Mentor - Zhe Liu* *[Jun '18 - Aug '18]*
Classification in the presence of label noise in training data
Deep learning ensemble framework to integrate weakly-labelled and high-quality training samples.

VISION AND LEARNING LAB, Univeristy of Michigan *[Fall '17]*
Human Pose Estimation, *Guide: Prof. Jia Deng*
Developing a PyTorch framework of the Stacked Hourglass network for human pose estimation.

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 etection 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 SOCEITY 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

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