Yash 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 EE and *Minor* in Computer Science, **GPA**: 9.44/10.0

SKILLS

Languages Python, C++, MATLAB, Java, Verilog, R, Bash, Julia (basic)
Packages PyTorch, OpenAI gym, Keras, TensorFlow, OpenCV, CUDA, python-flask, git

WORK EXPERIENCE

IBM Almaden Research Center, *Mentor - Zhe Liu* *[Summer '18]*
- Task-agnostic classification in the presence of label noise in train data (specifically, sentiment classification)
- Built deep learning and ensemble frameworks to integrate weakly-labelled and high-quality training samples.

VISION AND LEARNING LAB, Univeristy of Michigan *[Fall '17]*
- Human Pose Estimation and Tracking in vidoes, *Guide: Prof. Jia Deng*
- Developed a Stacked Hourglass network + BiLSTM model in PyTorch for human pose estimation.

IBM RESEARCH, Bangalore, *Mentor - Vikas Raykar* *[Summer '16]*
- Joint multi-modal representations for e-commerce catalog search by visual attributes
- Built autoencoder CorrNets in Tensorflow for fast 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 for augmented reality based furniture startup
- Created a range of linear programming solvers by modifying functions in FreeCAD in Python and C++.

RELEVANT COURSES

Machine Learning, Advanced Computer Vision, Reinforcement Learning, Probability & Random Processes, Parallel Computing, Computational Data Science, Design & Analysis of Algorithms, Data Structures, Microprocessors

KEY COURSE PROJECTS

- **Scattering Wavelet Network based approach to Fingerprint Classification**, Undergraduate Thesis
- **Convolutional Neural Network from scratch**, Advanced Computer Vision [github]
- **Sarcasm detection in sentences**, Machine Learning (CS 725) [github]
- **Segmentation of MRI images using Expectation Maximization**, Estimation and Identification
- **Computer Vision and Image Processing algorithms acceleration with CUDA**, High Performance Scientific Computing [github]

TEACHING EXPERIENCE

Graduate Student Instructor, Computational Data Science, University of Michigan *Fall '18*
Graduate Student Instructor, Introduction to Logic Design, University of Michigan *Winter '18*
Teaching Assistant, Wavelets, IIT Bombay *Fall '16, Winter '17*