AYUSH CHOPRA

(+91) 7503203009 ⋄ ayushchopra96@gmail.com
Website ⋄ www.ayushchopra.me

EDUCATION

Delhi Technological University *Aug 2014 - May 2018*
Department of Computer Engineering GPA: 9.23/10

Delhi Public School *Graduated 2014*
AISSE: 96% AISSCE: 10/10 JEE: 3442/1.5 million

EXPERIENCE

Adobe Inc August 2018 - Present, May 2017 - October 2017
Member Technical Staff, Intern

- Working with **Media and Data Science Research Group**. Deep Learning and Computer Vision to deliver interactive retail experiences.
- **Image Retrieval**
  - Proposed a grid ingestion strategy for generating robust feature representation for large scale retrieval tasks [CVPRW 2019, Best Paper Award]
  - Proposed gradient based attentive regularizer to improve performance of retrieval and classification tasks. [Submitting Paper]
- **Edge Computation**
  - Used RL based search to learn data specific kernal functions to improve performance of SVM.
- **Scene Generation**
  - Proposed a patch-based duelling loss to enable stable GAN training when composing high resolution scenes images. Use the same to prototype a virtual try-on framwork. [Submitting Paper]

MIT Media Labs October 2018 - March 2019
Research Collaborator

- Worked with **Camera Culture Group** on data driven non-line-of-sight (NLOS) Imaging.

Google Summer of Code March 2018 - August 2018
Mentor

- Supervised computer vision projects on text detection and structure extraction.
- Details: http://ayushchopra.me/projects/gsoc18

Mythical Labs May 2017 - August 2018
Technical Advisor

- Tackled challening problems in Action Recognition and Instance Segmentation for www.remotehq.com
- Collaborated with PhD graduates from MIT and Harvard.

CV Lab, IIT Delhi/IIIT-Delhi August 2016 - September 2017
Research Assistant

- Worked on ensemble methods for pose disentanglement for classification tasks characterized by high intra-class and low inter-class variance.
- Details: http://ayushchopra.me/publications/FGVC

Optimization Lab, DTU May 2016 - July 2017
Research Intern

- Worked on a hierarchical variant of differential evolution to optimize high dimensional multi-modal and composite objective functions.
- Details: http://ayushchopra.me/publications/HIDE

Coding Blocks October 2017 - April 2018
Instructor

- Taught a math intensive course on introduction to machine intelligence to industry professionals.
- Details: http://ayushchopra.me/projects/codingblocks

National Physical Laboratory May 2014 - December 2014
Research Intern

- Studied antistatic and electromagnetic properties of conducting polymeric substrates at the Soft Material Division.
- Details : http://ayushchopra.me/publications/chem

PUBLICATIONS

POWERING ROBUST FASHION SEARCH WITH INFORMATION RICH FEATURE EMBEDDINGS [Oral, Best Paper Award]
Accepted *Long Beach, California*

- *A.Chopra*, A. Sinha*, M. Sarkar, K. Ayush, Balaji K*
- 32nd IEEE International Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2019

POSE AWARE FINE GRAINED VISUAL CLASSIFICATION FOR FASHION
Accepted *Athens, Greece*

- *K. Mahajan*, A. Chopra*, T. Khurana, C. Arora, A. Rai*
- 25th IEEE International Conference on Image Processing (ICIP), 2018

HIERARCHY INFLUENCED DIFFERENTIAL EVOLUTION:A MOTOR OPERATION INSPIRED APPROACH
Accepted *Funchal, Portugal*

- *A. Chopra, S. Dokania, F. Ahmad, A. Parihar*
- 9th International Joint Conference on Computational Intelligence, 2017

UNSUPERVISED FEATURE DESCRIPTORS BASED FACIAL TRACKING OVER DISTRIBUTED SUBSPACES
Accepted *Kolkata, India*

- *S.Dokania*, A. Chopra*, F. Ahmad, S. Indu*
- 7th International Conference on Pattern Recognition and Machine Intelligence, 2017

PATENTS

Filing Organisation: Adobe, Law Firm in US: Shook, Hardy and Bacon (SHB)

- Methods for Exploring and Recommending Matching Products with an Emphasis on Cross-Selling
- Learning Specialized Transformations to Improve Performance of Recommendation and Classification Systems
- Methods for Cognitive Recommendation and Filtering of Products
- Non Label Preserving Augmentations for Minority Class Upsampling

TECHNICAL SKILLS

Programming Languages	Python, Java
Libraries and Frameworks	OpenCV, Flask, Scikit-Learn, MySQL, Pandas, Latex
Deep Learning	Caffe, Tensorflow, Pytorch, Keras
Development	Spring, JavaScript, CSS, HTML5