

# AYUSH CHOPRA

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Website ◇ [www.ayushchopra.me](http://www.ayushchopra.me)

## EDUCATION

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**Delhi Technological University**  
Department of Computer Engineering

*Aug 2014 - May 2018*  
GPA: 9.23/10

## TECHNICAL SKILLS

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

## EXPERIENCE

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<b>MIT Media Labs</b> <i>Remote Collaborator</i>	Oct 2018 - Present
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- Working with **Camera Culture Group** on data-driven NLOS imaging.

<b>Adobe Inc</b> <i>Member Technical Staff</i>	Aug 2018 - Present
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- Working with **Media and Data Science Research Group** in Imaging Sciences.
- Computer Vision and Deep Learning to tackle challenging problems in marketing and customer experience.

<b>Google Summer of Code</b> <i>Mentor</i>	March 2018 - Aug 2018
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- Mentor with [Open Food Facts](http://openfoodfacts.org) for Computer Vision and Data Science projects.
- Gave talk on **Computer Vision at Open Food Facts** at mentors' summit 2018.
- Details: <http://ayushchopra.me/projects/gsoc18>

<b>Adobe Inc</b> <i>Research Intern</i>	June 2017 - March 2018
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- Worked with the **Media and Data Science Research Group**. Offered **full-time position** starting Fall 2018.
- Proposed novel siamese network based pipeline for generation of robust feature vectors. **Arxiv preprint** to be released soon.
- **US Patent** pending and service incorporated into Adobe Sensei. Demo at **Adobe Marketing Summit 2018**.

<b>Mythical Labs</b> <i>Technical Advisor</i>	May 2017 - Present
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- Machine Learning strategy and development for video conferencing platform [www.cyclops.io](http://www.cyclops.io)
- Built computer vision modules for gesture driven interactions and visual artefacts modelling to improve participant experience.
- Built and curated inhouse gesture dataset of over 35k images from diverse scenes with gesture class and bounding box annotations.

**CVML, IIIT-Delhi**

August 2016 - Jan 2018

*Research Intern*

- Worked on Fine Grained Visual Classification
- Proposed approach based on applicability of shallow pose experts for solving FGVC tasks, particularly in the fashion domain. Paper accepted at **ICIP 2018**.
- Details: <http://ayushchopra.me/publications/FGVC>

**Coding Blocks**

October 2017 - April 2018

*Instructor and Mentor*

- Taught the Data Science and Machine Learning course.
- Place special emphasis to mathematical fundamentals as well as the tricks of data engineering apart from the state of the art work in Deep Learning and Machine Learning.
- Details: <http://ayushchopra.me/projects/codingblocks>

**National Physical Laboratory**

May 2014 - December 2014

*Research Intern*

- Worked on Computational Chemistry and System Design with the Soft Material Division.
- Studied effects of electromagnetic interference and antistatic properties of conducting polymeric substrates for improving efficiency of computer internals.
- Details : <http://ayushchopra.me/publications/chem>

## RELEVANT COURSES

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### Core Courses

Database Management Systems  
Operating Systems  
Object Oriented Programming  
Computer Networks  
Theory of Computation  
Algorithm Design and Analysis

### Other Courses

Artificial Intelligence  
Information Theory  
Data Mining  
Discrete Mathematics  
Neural Networks  
Introduction to Cryptography

## PUBLICATIONS

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### 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

## **BIOCIDAL AND ANTISTATIC PROPERTIES OF FABRIC MODIFIED WITH POLYANILINE MICROTUBES**

**Accepted**

*Dhurahat, India*

- *A. Chopra, H. Bist, S.K. Dhawan*
- Conference on Environmental Economics and Social Sustainability, 2014

## **PATENTS**

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### **GRID SEARCH NETWORKS FOR PRODUCT SEARCH IN THE WILD**

**Submitted**

*2018*

- *Parent Organisation: Adobe Inc*

### **MULTI-TASKED NETWORKS FOR VISUAL ARTEFACT MODELLING IN VIDEO CONFERENCES**

**Pending**

*2018*

- *Parent Organisation: Cyclops*

### **MULTI-MODAL GESTURE DRIVEN INTERACTIONS IN VIDEO CONFERENCES**

**Pending**

*2018*

- *Parent Organisation: Cyclops*