Akshit Tyagi
Junior Undergrad Electrical Engineering
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Education

- **Indian Institute of Technology, Delhi** — New Delhi, India
  B.Tech. in Electrical Engineering, CGPA: 9.293 — *2014 - 2018 (expected)*
- **Delhi Public School, R.K. Puram, Std. XII** — New Delhi, India
  Graduated with a 97.0 aggregate percentage — *Graduated in 2014*
- **Delhi Public School, R.K. Puram, Std. X** — New Delhi, India
  CGPA: 10.0 — *Graduated in 2012*

Work Experience

- **Summer Engineering Intern** — NVIDIA, Bengaluru, India
  CPU Verification and Testing Team — *May - July 2016*
  - Worked on handling undefined opcodes for an architectural simulator. This involved handling instruction level access for the CPU and the execution of exception return.
- **Winter Software Engineering Intern** — Dealsnprice.com, Gurgaon,India
  Deep Learning and Image Search Team — *Nov.- Dec. 2015*
  - Worked on Deep Learning Algorithms involving implementation and optimization of Convolution Neural Network algorithms to optimize image search and object detection for an e-commerce website.

Projects undertaken

- **Automated Renting and Vending Machine** — IIT Delhi
  Design Innovation Summer Award (DISA) under Prof. M. Balakrishnan — *May-July 2015*
  - Prototyped a product which can rent out umbrellas and accept them back. Implemented image processing for detecting the change(s) in the umbrella before it was vended out. This enabled us to build a verification system to detect if any damage has been done to the product.
- **A Small Search Engine using Inverted Page Index** — COL106(Course), IIT Delhi
  Course Assignment — *October 2015*
  - Made a small Search Engine that can return a list of most relevant queries for word(s)(phrases,AND,OR statements can be handled) using HashTable lookup in an InvertedIndex for a set of pages. Code can be found at https://github.com/akshittyagi/SmallSearchEngine

- **Background Detection in a Video Stream** ELL409(Course), IIT Delhi
  Course Assignment *February 2016*
  - Developed a program that could detect Background and Foreground pixels using the Background Subtraction technique (using Gaussian Mixture Models). OpenCV was used to handle the video file, and create two separate output files containing the Background and Foreground video streams.

- **Facial Recognition using Fisher and Eigen faces** ELL409(Course), IIT Delhi
  Course Assignment *April 2016*
  - Worked on implementing a facial recognition applet that uses Class specific linear projection to train and classify faces from a training set. Eigenfaces method was also implemented and the results were compared between the two.

Awards, Grants & Honours

Design & Innovation Summer Award(DISA) IIT Delhi,2015
Project Idea was selected to be completed and prototyped under the DIS Award

Institute Award for being a student in the top 7% in the first year IIT Delhi,2014-2015

National Talent Search Examination 2010 NCERT, July 2010
Awarded the Scholarship

KVPY Fellowship 2012-13 DST,2013
Awarded the Fellowship

Indian National Chemistry Olympiad 2014 HBCSE,February 2014
finished in top 50 students nationally

Junior Science Talent Search Examination 2011 Govt. of Delhi,July 2011
Awarded the Scholarship, stood 2^{nd} in state

Relevant Courses Taken

Communication Engineering*	Digital Logic and Circuits	Machine Learning
Data Structure and Algorithms	Course in Analysis of Algorithms in Java	Electromagnetics
Probability and Stochastic Processes	Linear Algebra and Differential Equations	Calculus
Deep Learning*	Artificial Intelligence*	

*Courses to be completed in the Fall Semester of 2016-17

Designing and Programming Skills

Extensive	C/C++, Java, MATLAB, Bash(Unix Shell), Python
Intermediate	JavaScript, XML, Android Studio
Basic	CSS, HTML5, Mathematica