

AYUSH PATEL

Junior Undergraduate, Computer Science
Indian Institute of Technology, Delhi

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ACADEMIC DETAILS

Year	Degree	Institute	CGPA/Percentage
2016-2020 (Expected)	B.Tech in Computer Science and Engineering	Indian Institute of Technology Delhi	9.235/10 (after IV Sem)
2016	Class XII, CBSE	O. P. Jindal School, Raigarh (C.G.)	97.8%
2014	Class X, CBSE	O. P. Jindal School, Raigarh (C.G.)	10/10

SCHOLASTIC ACHIEVEMENTS

- **Top 1%** in the country in **All India Senior School Certificate Examination (AISSCE)** Class XII Examination
- Secured **All India Rank 192** in JEE Mains and **All India Rank 575** in JEE Advanced among 2 million students
- Selected as **KVPY** Scholar under ‘Kishore Vaigyanik Protsahan Yojana’ organised by Indian Institute of Science
- Awarded **IIT Delhi Merit Scholarship** for being in the **top 7%** among 850 students in the 1st and 2nd semester
- **State Topper** in All India Senior School Certificate Examination (AISSCE) for Class XII, 2016

INTERNSHIPS

DashCam Car Accident Prediction

Summer Internship

ITRI, Hsinchu, Taiwan

May 2018 - July 2018

- Built Python module to crawl DashCam Videos and separate clips from these videos that contain car accidents
- Worked with OpenCV, scikit-learn, Darknet YOLO, selenium and various image processing algorithms
- Used Python Tensorflow to train a model for predicting car accidents to be used in self-driving cars to avoid accidents

MAJOR PROJECTS

Capture The Flag WebApp

Summer Research Project

Prof. Ranjan Bose (CoE-CSIA, IIT Delhi)

May 2017 - July 2017

- Developed a CTF webapp on Django Framework with sqlite for hosting information security competitions on large scale

Tank Assault

IITD Development Club Project

May 2017 - July 2017

- Developed a web based multiplayer game with Node.JS as Backend server and used sockets for real time connections

Departmental Site for Water Resources

Design Project

Prof. Sumedha Chakma (CE, IIT Delhi)

July 2017 - August 2017

- Developed departmental website for Water Resource and Engineering Department on php-server using MySQL database.

Protective Cover for Mobile Phones

Winter Project

Prof. Sudipto Mukharjee (ME, IIT Delhi)

December 2017

- Designed and Implemented embedded system of a phone cover whose corners expand on falling(used SMA and AtTiny)

Nokia ML Hackathons

Company Project

Prof. Niladri Chatterjee (Maths, IIT Delhi)

January, 2018 - March, 2018

- Worked with Hadoop, Docker, JupyterHub etc. to develop a platform for hosting large scale Data Science Hackathons

COURSE PROJECTS

Multicycle ARM Processor

Prof. Anshul Kumar, March, 2018 - April, 2018

Developed a Multicycle processor for the ARM ISA in VHDL on FPGA, implementing AHB Lite Bus for connections

Prolog Interpreter

Prof. Sanjiva Prasad, March, 2018 - April, 2018

Implemented an interpreter for Prolog in OCaml using OCaml-lex for token generation and OCaml-yacc for parsing

Software Package for Engineering Drawing (ED)

Prof. Subhashis Banerjee, January, 2018 - February, 2018

Used OpenCV and Qt C++ to build a software package for performing ED operations on a given 3D model / 2D figures

Elevator Control System

Prof. Anshul Kumar, August 2017 - September 2017

Designed and Implemented an Elevator Control System to serve simultaneous requests on multiple lifts

Image Compression Script

Prof. Mausam, September 2017

Built Java module to perform operations eg. inversion on uncompressed image and produce it's compressed version

COURSES UNDERTAKEN

• **Institute Courses:**

** Currently Pursuing*

Data Structures, Discrete Mathematical Structures, Probability and Stochastic Processes, Programming Languages, Computer Architecture, Digital Logic and System Design, Calculus, Signals and Systems, Linear Algebra and Differential Equations, Computer Networks*, Analysis and Design of Algorithms*, Digital Image Analysis*, Principles of Artificial Intelligence*

• **Online Courses:**

Machine Learning (by Stanford University), Deep Learning (by Stanford University)

TECHNICAL SKILLS

• **Programming Languages:**

C, C++, Java, C#, Python, HTML, CSS, JavaScript, PHP, SQL, Bash, VHDL, LaTeX, Ocaml, Prolog, Scala, XML

• **Softwares and Frameworks:**

Django, Ember.JS, Sails.JS, Node.JS, Express.JS, Android Studio, React-Native, Eclipse, NetBeans, Git, Xilinx ISE Design Suite, Vivado, Octave / MATLAB, Visual Studio, Apache Hadoop, Spark

EXTRA CURRICULAR ACTIVITIES

- **Executive Team Member and Developer** in **DevClub** (Developers' Club IITD) (January 2017 - Present)
- **Web Executive / Technical Representative** in **BSA IITD, AAIP IITD, SAC IITD** (April, 2017 - April, 2018)
- Took various Development Sessions as **Microsoft Student Partner India, 2017** (Delhi-NCR Region)
- **Overall Coordinator / Manager / Developer** of **Nokia Data Science Hackathon IIT Delhi** (April 2018)
- Part of **Hostel Organizing Committee** (Mess Committee, Fest Organization)

POSITION OF RESPONSIBILITIES

- **Technical Coordinator** in **Board for Recreational and Creative Activities** (April, 2018 - Present)
- **Technical Secretary** in **Board for Hostel Management** (April, 2018 - Present)
- **Computer and Library Secretary** in **Satpura Hostel** (April, 2018 - Present)
- **Technical Coordinator** in **Board for Hostel Management** (April, 2017 - April, 2018)