



AKSHAT KHARE

Computer Science Undergraduate, Indian Institute of Technology Delhi



ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
2016	CBSE	Aklank Public School Kota	91%
2014	CBSE	Carmel Convent School Amlai	10/10

SCHOLASTIC ACHIEVEMENTS

- **Joint Entrance Examination (JEE) Advanced 2016:** Secured **AIR 63 (GE)** in JEE Advanced 2016.
- **KVPY Scholar (2014-15):** Selected for Kishore Vaigyanik Protasahan Yojana fellowship.
- **NTSE Scholar:** Qualified National Talent Search Examination (2012) conducted by NCERT.
- **Vigyan Manthan Programme (M.P. Govt.):** Selected in the program to represent M.P. state in 2011 and 2014.
- **National Standard Examination in Physics (NSEP):** Qualified NSEP the year 2015-16, being in top 1% in country.

INTERNSHIPS

- **Google Summer Of Code, Open Roberta Lab, Germany (May, 2018 - August, 2018) :** *Multiple robots in simulation*
 - Added the feature of multiple robot simulations for *EV3 Robot* in the software where users can test programs virtually
 - Worked with *Asynchronous Javascript, JavaServer Pages, Jetty Framework, MVC Framework, NEPO language.*

PROJECTS

- **PackagED: Software for Engineering Drawing (Prof. Subhashis Banerjee)** (Course Project. Jan, 2018 - March, 2018):
 - Designed and implemented algorithms to project a 3D Object on any given plane, and to recover back the 3D Object from the three orthographic views. Developed an interactive GUI, with custom features, for the same.
- **Starling Flocking Simulation (Prof. Subhashis Banerjee)** (Course Project. March, 2018 - April, 2018):
 - Simulated the flocking of birds, using standard plus self-defined flocking rules with interactive GUI using Processing.
- **3D-Printed Sole using Foot Plantar Pressure (Prof. Tapan K. Gandhi)** (February, 2018 - July, 2018) :
 - Developed algorithms for refining, filtering and interpolating plantar pressure data and made software package with gui.
 - 3D-sole was reconstructed conceptualizing variable infill density and appropriate depth fitting for comfort.
- **Prolog Interpreter (Prof. Sanjeeva Prasad)** (Course Project. March, 2018 - April, 2018):
 - Designed and built a Prolog Interpreter with backtracking in OCaml with front-end using OCamllex and Ocamllyacc.
- **kipDist: Pre-Road Accident Detection Application (Road Safety Hackathon 2018)** (February, 2018) :
 - Developed application which gives distance of vehicles from 2D images, applied 3-second rule to predict accident.
- **Web Applications Penetration Testing (Prof. Ranjan Bose)** (Summer Project, May, 2017-July, 2017) :
 - Analysed, learnt and documented the various techniques and skills related to Web & System Penetration Testing
- **Mouse Positioning using VHDL (Prof. Anshul Kumar)** (Course Project. October 2017 – November 2017):
 - Implemented a VHDL code to interface USB mouse with Basys 3 board using the USB HID port on the FPGA.
- **Arduino Android Sync App (Andruino) (Robotics Club IIT Delhi)** (May, 2017 - July, 2017) :
 - Made an android app to integrate Arduino with an Android device via Bluetooth module to remotely control the robot.
- **Multi-cycle ARM Processor (Prof. Anshul Kumar)** (Course Project, February, 2018 - April, 2018):
 - Designed and implemented a complete Multi-cycle ARM Processor connected to the main memory through AHB-Litebus, in VHDL language. Tested it by feeding instructions and checking output on BASYS3 Seven Segment Display

PUBLICATIONS

- **3D-Printed Sole with Variable Density using Foot Plantar Pressure Measurements**, 2018 IEEE 8th International Advance Computing Conference (IACC 2018, 14-15 Dec 2018): Co-authored with Prof. Tapan K. Gandhi, IIT DELHI.

TECHNICAL SKILLS

- **Languages:** Java, JavaScript, Python, C++, OCaml, Prolog, Processing, HTML/CSS, VHDL, PHP, SQL, JQuery, Matlab
- **Tools:** Git, Android Studio, Arduino, Eclipse, MetaSploit, Kali Linux, OpenCV, Django, Xilinx ISE, Vivado, Nmap

EXTRA CURRICULAR ACTIVITIES

- **Hackathons:** Winner of *Road Safety Hackathon* and successful submission of ChatBot in CodeFunDo Microsoft.
- **Indian Road Safety Campaign (May, 2017- July, 2017):** Supervised team of four students for Technical Internship
- **Inter Hostel Group Dance, Streetplay and Stageplay, Video:** Sixth in Group dance, Fourth in play, Directed video

POSITIONS OF RESPONSIBILITY

- **Web Executive, Board of Student Welfares (BSW) IIT Delhi** (May, 2017 - Nov, 2017): Development of website
- **Executive, Technical Arm, Indian Road Safety Campaign** (Dec, 2016 – July, 2017): Handled Technical Domain
- **Team Member, Robotics Club IIT Delhi** (Mar, 2017 - Nov, 2017): Made a debugging app and worked on drives.