# Faran Ahmad

Undergraduate Student (Sophomore)
Computer Science and Engineering
Indian Institute of Technology, Delhi

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## Academic Details

| Year | Degree/Examination | Name of Institution | CGPA / Marks(%) |
|---|---|---|---|
| 2013-2017 (Expected) | *B.Tech. in Computer Science and Engineering* | Indian Institute Of Technology, Delhi | 9.018/10 |
| 2013 | *XII Grade All India Senior School Secondary Examination 2013* | Colonel Satsangi's Kiran Memorial Public School, Delhi | 95.6% |
| 2011 | *X grade All India Secondary School Examination 2011* | Air Force Bal Bharti Public Scool, Delhi | 10.0/10.0 |

## Courses Done

Introduction to Computer Science, Data Structures and Algorithms , Discrete Mathematical Structures , Digital Logic and Hardware Design , Analysis and Calculus, Linear Algebra and Differential Equations, Probability and Stochastic Processes , Programming Languages*, Computer Architecture*, Design Practices in Computer Science*, Digital Electronics Laboratory , Introduction to Electrical Engineering, Principles of Electronic Materials.
*Courses currently pursuing*

## Scholastic Achievements

- Awarded Certificate Of Merit by IIT Delhi for being in Institute **Top 7%** among first year undergraduate students in semester II, 2013-2014.

- Secured **All India Rank 34** in Indian Institute Of Technology Joint Entrance Examination (JEE Advanced-2013).

- Secured **All India Rank 218** out of 1.4 million candidates appearing in Joint Entrance Examination(JEE Mains-2013) organized by Central Board Of Secondary Education(CBSE).

- Awarded the KVPY fellowship under 'Kishore Vaigyanak Protsahan Yojana' administered by Indian Institute of Science in 2012-2013.

- Secured a **perfect score** in Chemistry in All India Senior School Certificate Examination(2013) organized by CBSE in XII grade.

- Awarded Certificate Of Merit by Indian Association Of Physics Teachers for being in **National Top 1%** at National Standard Examination in Astronomy 2012.

## Course Projects

- **Digital Circuit Minimization**                    August 2014, Prof. Kolin Paul
  Created a program in C++ to implement Quine McCluskey algorithm to determine irredundant minimal expression to optimize a given digital circuit design. The program provides an interface which takes the minterms along with dont care combinations as an input of a given Boolean function of any given number of variables and compute accurate minimal expression for the same under computable limits of data.

- **Symbolic Computation of Algebraic Expressions**      November 2013, Prof. S. Arun Kumar
  Created a program in SML that manipulates a given multivariate expression according to the rules of mathematical logic. The program allows us to do basic computation of a multivariate expression along with non-trivial computation like indefinite integration and partial differentiation with respect to a variable. It can also be used to check whether two expressions written in different form are equivalent by converting them into most simplified form.

- **File Compressor**                    October 2014, Prof. Amit Kumar
  Created a program in C++ to make a file compressor which incorporated Lempel-Ziv-Welch Algorithm to compress any given file as input and further decompress a file given in the compressed form.

- **Morse Code Generator**                    September 2014, Prof. Kolin Paul
  Designed and implemented a circuit using VHDL (in XILINX ISE design suite) that transmits text information converted into morse code using LEDs on FPGA board. The circuit takes the ASCII value of alphabets as input and the activation time of LED determines the sequence of dots and dashes which represents the morse code for a particular alphabet and subsequently the message.

- **Spam Classifier**                    October 2014, Prof. Huzur Saran
  Created a program in Python to classify whether an e-mail is spam or not based Naive-Bayes Spam filtering technique using machine learning and data mining.

## Technical Skills

- **Languages known:** C/C++, Python, SML, Java, Java Script, HTML, CSS, PHP.
- **Hardware Descriptive Language:** VHDL.
- **Softwares:** Xilinx ISE Design Suite, Latex, Autodesk Inventor Professional.

## Other Activities

- Volunteer in DNipCare, a NGO that aims at development of sustainable cost effective system of Palliative Care for patients suffering from long term diseases like cancer.
- Volunteer and a regular blood donor in the blood donation camps organised by Blood Connect, as a part of National Service Scheme, IIT Delhi.