



# RAHUL GOEL



## ACADEMIC DETAILS

Year	Degree / Exam	Institute	GPA/Marks(%)
----	B.Tech in Electrical Engineering (Power)	Indian Institute of Technology Delhi	7.93
2010	CBSE	St Johns Senior Sec. School Kota	86%
2008	CBSE	DPS, Noida	92%

## COURSES DONE

Intro. To Computers And Programming , Data Structures , Programming Languages , Computer Networks , Computer Graphics, Intro. To Analysis & Differential Equations , Computer Architecture, Computer Technology Laboratory, Chemistry Laboratory , Num. Methods & Computation , Mini Project (ep) , Fundamentals Of Elect. Engg. , Digital Electronics , Circuit Theory , Electromechanics , Analog Electronics Circuits , Signals & Systems , Power Electronics Devices & Circuits , Control Engineering I , Power Engineering - I , Electric Drives , , Power Conditioning , Embedded Systems , Power Systems Protection , Nonconventional Energy Sys.&energy Conservation , Digital Electronics Laboratory , Electromechanics Laboratory , Electronics Lab. Ii , Power Electronics Laboratory , Design (ep) , Control Engineering Laboratory , Power Engineering Laboratory , Drives Laboratory , Macro Economics , Indian Economic Problems And Policies , Psychological Basis Of Behaviour , Organizational Psychology , Intro. To Algebra & Matrix Analysis , Manufacturing Practices , Fields And Waves , Physics Laboratory ,Engineering Mechanics.[Currently undertaking: Algorithmic Analysis, Probability and stochastic process, Software Engineering, Neural Networks]

## INDUSTRIAL TRAINING

**Design and standardization of cooling system for "Chocofill " cookies,** ITC Limited (May, 2013 - July, 2013)

**Description** - Studied and analysed cooling process of premium(chocofills) cookies to develop a new , standardizable ,replicable cooling process resulting in cost savings and process simplification

**Achievement** • Recommended, designed and tested a new cooling system ,which reduced the cooling time from present 40 minutes to 14 minutes and resulted in cost savings

- The cooling process, parameters affecting it were analysed and documented and a standard operaing procedure(SOP) was made.

## IIT DELHI THESIS

**Title** - Intelligent control of power system components using Machine Learning

**Supervisor** - Dr. B.K panigrahi

**Description** –Modifying the behaviour of various components in power systems such as relays etc using adaptive Machine Learning techniques to get the best performance(stability and efficiency) out of system

## QUALIFYING EXAMS

- Qualified KVPY (first round) in 12<sup>th</sup> standard
- Among the state top 1% in National Standard Examination in Physics.(12<sup>th</sup> standard)
- Qualified(in top 500) National Science Olympiad(NSO) and International Math Olympiad(IMO) in academic year 2009-2010
- **JEE Rank:** 685( out of 4.95 lakh aspirants) in JEE 2010

## PUBLICATIONS

- **Patent number- 1610/DEL/2013 - Digital Fuel Meter for automobiles** (Submitted)

## WORK EXPERIENCE

- **Karshin Technologies** (Apr, 2013 - Aug, 2013) : Cofounded Karshin technologies - a IIT Delhi alumni startup. Technical Head of the startup till Aug 2013
  - Developed and tested Digital Fuel meter (company's main product)- consisting of a sensor , microcontroller ,GPS, GSM module and a display unit, from scratch (including all the coding and UI)
  - Patented Fuel meter technology, with other founders(Patent Number-1610/DEL/2013)

## INTERNSHIPS

- **Vacational Training, NTPC Limited** (May, 2011 - Jun, 2011) : Studied and analysed the power plant situated at NTPC Badarpur and observed duties of a power engineer at a power plant.
  - Identified key practices for efficient power production and general functioning of a power plant
  - Learned about teamwork , work culture and the chain of command at a big factory.

- **Design of automatic mailing software and study of HRC fuses, Havells Ltd** (May, 2012 - July, 2012) : Part of core R&D team at Havells Faridabad, studied HRC fuses, developed software customized for them.
- Designed and developed a complete mail sending application according to company specifications, using LABVIEW 11; following incremental model of software development
- The software reads from a Excel File, automatically composes and sends scheduled mails to people.

## PROJECTS

**Wind speed Prediction using past data**(Jan 2013 to May 2013): Mini Project done under Dr. B K Panigrahi , the project involved learning about machine learning and using neural networks to predict wind speed on hourly basis with the help of past data.

**Bubble popping game**( Jan 2013 to May 2013): Project Done in computer graphics course ( In OpenGL)

- Made a complete playable game; multiple transparent bubbles are rendered in a 3D space and player pops bubbles by clicking on them. The game has a timer , a score counter and various difficulty levels.
- Implemented environment mapping ,shadow mapping, and texture mapping, collision detection using Octree

**Dynamic battery charge optimiser for solar cells** (Aug, 2012 - Nov, 2012) : Made a arduino based battery charge controller which regulates power input to battery according to charge present in battery, it displays the data on a screen and optimises battery life

**Tic tac toe using FPGA** (Jan, 2012 - Apr, 2012) : Made a tic tac toe game playable against AI on hardware using FPGA, in Xilinx. The game has 9 hardware buttons corresponding to each tic tac toe position and leds to represent the current state.

**Integrated Android app** (Aug, 2013 - Present) : The app combines the feeds of various social networks( like facebook twitter) and other services (like feeds ,and sites) in one integrated app , done as a part of software engineering course.

**Algorithmic Trading using machine learning** (Aug, 2013 - Present) : Involves applying machine learning(SVMs) to past trading data to train a programme capable of making profits in stocks markets in long run by identifying patterns and profitable trades

## TECHNICAL SKILLS

**Languages:** C( includes OpenGL),C++,Python ,VHDL , ML , Ocaml ,Java ,Prolog.

**Softwares:** MATLAB ,LABVIEW,PSIM ,Xilinx

## POSITIONS OF RESPONSIBILITY

- **Activity Head Virasat (2012)** (Feb, 2012 - Mar, 2012) : Responsible for bringing Food sponsors for fest (one of sponsors of fest). The fest was the biggest Virasat(Annual Indian cultural festival) till date
- **Activity Head, Tryst - 12, Hospitality** (Mar, 2012 - Mar, 2012) : Responsible for Smooth functioning of the fest(Annual technical fest). Highest turnout in Tryst(till date) seen.
- **Team Head , Rendezvous-11** (Oct, 2011 - Oct, 2011) : Worked in Marketing of Rendezvous(annual cultural fest of IIT Delhi) Responsible for flower sponsorship for the fest and Sports Sponsorship

## OTHER INTERESTS

Participated in workshops on ethical hacking, search engine optimization, android app development.

**Hobbies:** Surfing Net, Playing Badminton and computer games, Listening Music, coding contests .