

# NIKHIL AGGARWAL

Sophomore Undergraduate  
Dept. of Computer Science and Engineering  
Indian Institute of Technology, Kanpur, India  
E-mail: [nikhil@iitk.ac.in](mailto:nikhil@iitk.ac.in) , [nikhil23393@iitk.ac.in](mailto:nikhil23393@iitk.ac.in)

169, Hall 2  
IIT Kanpur-208016  
Phone: + (91) 7607481193

## Education

Degree / Certificate	Institution	CPI / Percentage
B.Tech	Indian Institute of Technology, Kanpur, India	9.9 / 10.0* (3.96 / 4.00)
Class 12 : CBSE Board	Apeejay School, Sheikh Sarai, New Delhi, India	92.2%
Class 10 : ICSE Board	Christu Jyoti Convent School, Baghpat, UP, India	93.3%

\*after completion of 1<sup>st</sup> year.

## Awards And Scholarships

- Awarded **Kishore Vaigyanik Protsahan Yojana (KVPY)** scholarship for the year 2009-10. Awarded to **top 90 students** across India
- Awarded **CBSE Merit Scholarship** under AIEEE 2010. Awarded to 332 students **among 11Lac** students
- Won **first prize** in Business Simulation Game conducted by **IIM-Ahmedabad**
- Awarded **certificate of excellence** in IGSC Scholarship Examination held in December 2002 at National level
- Awarded **Merit-cum-Means Scholarship** for meritorious performance for academic years 2010-'11 and 2011-'12

## Academic Achievements

- Achieved an **All India Rank 229 (AIR)** in **IIT-JEE'10** in which more than 500,000 students appeared. **Percentile- 99.95%**
- Secured **AIR 262 Rank** in AIEEE'10 in which nearly 1,100,000 students appeared. **Percentile- 99.98%**
- Secured **AIR 6** in UPTU Examination 2010. **Percentile- 99.997%**
- Awarded certificate of merit for being placed in top 1% in **National Physics Olympiad** 2010 held by Indian Association of Physics Teachers and qualified for next level exam.
- Awarded certificate of merit for being placed in top 1% in **National Chemistry Olympiad** 2010 Indian Association of Chemistry Teachers and qualified for next level exam.
- Qualified FIITJEE Talent Search Examination 2006(**AIR 78**) organized at national level

## Projects

### Digital Clock (Nov 2011)

*Technology used:* coding in BSV (BlueSpec Verilog), FPGA(Field Programmable Gate Array) architecture

- Designed a digital clock in bsv and implemented on FPGA architecture
- User could set time, set alarm and use clock as stop watch
- Received special appreciation from course instructor

### Cricbot (Dec 2011- ongoing)

*Technology used:* coding using OpenCV, Image Processing

- Autonomous bot that works on the principle of Image Processing
- The bot will have to collect the balls which will be rolled down from the ramp and then deposit them into the collection pit in minimum possible time
- It also plays a one on one cricket match against the opponent bot

### Rover Bot (Summers 2011)

- Developed a system design for a difficult regional exploration rover for demonstration of locomotion capabilities, payload accommodation, and control. This is somewhat similar to lunar rover.
- Efficient locomotion system capable of moving on
  - Rough terrain
  - Step
  - Cylindrical objects
  - Slope ( 50 deg.) and many more such surfaces

## Relevant Courses

- Discrete Mathematics\*
- Programming Tools & Techniques\*
- Data Structures & Algorithms
- Introduction to Computer Organization
- Multivariable Calculus
- Complex Analysis & Linear Algebra
- Fourier Analysis & Differential Equations
- Fundamentals of Computing(C language)

(\* courses to be done in Jan'12-Apr'12)

Technical Skills	
Programming Languages	C, C++, Java, Python, Assembly Language , Bluespec Verilog
Platforms	Windows- XP/Vista/7, Unix

## Positions of Responsibility

- **Academic Mentor, Counseling Service** IIT Kanpur for academic year 2011-12
  - Taught ESC101(C language) and PHY103(Electrodynamics) to students facing academic problems
- **Student Guide, Counseling Service**, IIT Kanpur for academic year 2011-12
  - Mentored 6 freshmen students and assisted them in getting familiar to the college environment
  - Responsible for their overall adjustment and performance in first year
  - Assisted in the successful organization of the orientation programme for the benefit of around 815 students in IIT Kanpur
- **Secretary, Robotics Club**, IIT Kanpur for academic year 2011-12
  - **Guided students** in robotics events in Techkriti, annual inter-collegiate technical festival of IITK and Takneek, the Intra-college Technical Festival of IITK
  - Responsible for scheduling and smooth conduction of robotics **lectures and workshops**
  - Organized competitions under Takneek and Techkriti, and projects for students over the summers
- **Computer Centre Secretary**, Hall 2 for academic year 2011-12
  - Responsible for installation of new softwares and proper working of the hardware
- **Assistant Co-ordinator, Robogames**, Techkriti'12
  - Responsible for organizing robotics events like *Robot's Got Talent*
  - Responsible for smooth conduction of robotics events like maintaining robotics arena and scheduling events
- **Takneek Pool Co-ordinator**, Takneek'11
  - Organised scientific and technological events from *Rajput pool*, consisting of 3 hostels
  - Overall effort lead to **second position** among other pools

## Extra Curricular Activities/Interests

- **Robotics**
  - Made an autonomous line following robot in Takneek'10
  - Participated in Kshitij'11 (IIT Kharagpur Technical Fest)
  - Made an All Terrain Vehicle in Summer Camp'11 organized by Robotics club IIT Kanpur
  - Participated in Wild Soccer in Takneek'11
  - Going to participate in Techfest'12 (IIT Bombay Technical Fest)
- **Business**
  - Won **First prize** in Business simulation game(a virtual company of cycle was given and investments were affected like original market) held in IIT Kanpur
  - Going to represent IIT Kanpur in **IIM Ahmedabad** in simulation games
- **Social Services**
  - Awarded **Certificate of Special Effort** in Mass Awareness Campaign against AIDS and Cancer organized by Caring Souls Foundation to alleviate the sufferings of the Needy Cancer Patients