**NIKHIL AGGARWAL** E-mail: [nikhil@iitk.ac.in](mailto:nikhil@iitk.ac.in) , [nikhil23393@gmail.com](mailto:nikhil23393@gmail.com) Ph. (+91)9005751932

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| **EDUCATION** |

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| **Year** | **Degree** | **Institution** | **Performance** |
| 2014 | B.Tech, Computer Science and Engineering | IIT Kanpur | **8.5/10.0\*** |
| 2010 | Class 12 : CBSE Board | Apeejay School, Sheikh Sarai, New Delhi | 92.2% |
| 2008 | Class 10 : ICSE Board | Christu Jyoti Convent School,Baghpat | 93.3% |

\*after completion of 6 semesters

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| **SCHOLASTIC ACHIEVEMENTS** |

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| **Awards** | * **Academic Excellence Award** for academic year 2010-11, awarded to top few students in the department * Certificate of merit for being placed in top 1% in **National Physics and National Chemistry Olympiad** 2010 * **Best Project and Second Best Project Awards** in manufacturing and mechanical course projects respectively |
| **Scholarships** | * **Kishore Vaigyanik Protsahan Yojana (KVPY)** scholarship for the year 2009-10 (***top 90 students*** across India) * **CBSE Merit Scholarship** under AIEEE 2010 awarded to 332 students from a pool of 11Lac students * Certificate of excellence in **IGSC Scholarship Examination** held at National level |

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| **INTERNSHIPS** |

**Content Monitoring for Wal-Mart affiliates (WM Global Technology Services India Pvt. Ltd, Bengaluru)** *(May-July 2013)*

*Technology used:* coding in JAVA, eclipse IDE, SBT project, Machine Learning

* Made a **binary classifier for Webpages**: Given a URL, classify it as Bad if it doesn’t adhere to Wal-Mart policies otherwise Good and display Wal-Mart ads on good Webpages
* **Generated probabilistic distribution data** of words in Bad URLs and Good URLs and concept matrix for huge dataset
* **Used logistic regression** to classify webpage leading to tremendous increase in precision and recall for bad page of the system
* Also **Implemented classification based on URL** and not the content of the Webpage by looking at the structure of the URL

**Parallel Computing for Autonomous Vehicle Simulation (Carnegie Mellon University, USA)** *(May-July 2012)*

*Guide:* Prof. Raghunathan Raj RajKumar, Department of Electrical and Computer Engineering, CMU

*Technology used:* coding in CUDA, GeForce GT530 NVidia Graphic Card

* **Implemented AutoSim for GPU Architecture** (Parallel execution) so that traffic model for a city could be simulated easily
* AutoSim is modular software **that Simulates Autonomous Cars** in hybrid environment consisting of real and autonomous cars
* **Analyzed Execution Time** for different models of AutoSim on single core CPU and GPU for different number of cars simulated
* **Performance of AutoSim increased by a factor more than 50** as compared to CPU(sequential execution) implementation

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| **KEY ACADEMIC PROJECTS** |

**Database Systems- Bill-Monk** *(March-April 2013)*

* Built a website where user could keep track of things he has borrowed from others and lend to others
* User could **add shared bills, payments of debts, shuffle** the debt between friends and manage his library of items

**Dynamic Graph Connectivity in poly-logarithmic worst case time: Graph Algorithms** *(March-April 2013)*

* **Implemented the Monte Carlo algorithm** for dynamic graph connectivity in poly-logarithmic worst case
* **Analyzed the error** in the answer and run time for different number of vertices and edges and compared with trivial algorithm

**Operating Systems** *(Aug-Nov 2012)*

* The project aimed at providing various **functionalities to PINTOS**, instructional software that runs as secondary OS on Linux
* Implemented **POSIX message queue, indexed file-system** with direct, indirect and doubly indirect blocks, **buffer cache, virtual memory management** via pure demand paging**, POSIX threads and scheduling algorithms** like First-Come-First-Serve, RR

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| **POSITIONS OF RESPONSIBILITY** |

* **Takneek Pool Coordinator** *(2012-13)*
  + **Led my pool** consisting of students from 3 hostels in organizing Takneek’12 and ensured healthy participation in all events
  + Scored 1100 points and stood **1st in more than 75% of the events** leading to remarkable success and **1st position in Takneek’12**
* **Secretary, Robotics Club**, IIT Kanpur *(2011-12)*
  + **Guided students and organized competitions** in robotics events in Techkriti and Takneek.
  + Responsible for scheduling and smooth conduction of robotics **lectures and workshops**
* **Academic Mentor, Counseling Service** IIT Kanpur: Taught ESC101(C language) and PHY103 (Electrodynamics) *(2011-12)*

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| **RELEVANT COURSES** |

**Data Structures & Algorithms, Algorithms II**, **Artificial Intelligence Programming**, Introduction to Mathematical Logic, Multivariable Calculus, **Probability and Statistics**, Complex Analysis & Linear Algebra, Fourier Analysis & Differential Equations, **Introduction to economics**, **Economic Analysis of Laws**, **Applied Game Theory**\*, Principles of Database Management

\*to be completed in July-Nov 2013

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| **EXTRA-CURRICULAR ACTIVITIES** |

* **Robotics:**
  + Developed a system design for a difficult **regional exploration** rover with extraordinary locomotion capabilities, payload accommodation, and control. An article for the same was **published in a TOI** describing about the robot's technologies.
  + Participated in Techkriti’11 and 12, Kshitij’11 IIT Kharagpur, Techfest’12 IIT Bombay, Wild Soccer in Takneek’11 and 12
* **Business:** Won **First prize** in **Business simulation game** on a virtual market for cycles held in IIT Kanpur by IIM, Bangalore