Yogesh Kumar Chauhan

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Computer Science and Engineering
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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2014 - Present	B.Tech. Computer Science and Engineering	Indian Institute of Technology, Kanpur	9.2*/10
2012-2014	Senior School Class XII (CBSE)	Maa Bharti Public School , Kota	95.8%
2012	Senior School Class X (CBSE)	G.A.I.L D.A.V Public School	10.0/10.0

* At the end of 4 semesters

Scholastic Achievements

- Achieved an All India Rank of **145** (in common merit list) in **Joint Entrance Examination** i.e. **JEE-ADVANCED** 2014 , conducted by the Indian Institutes of Technology (IITs) ,with a **99.9** percentile
- Attained an All India Rank of **250** in **JEE MAIN**- 2014 conducted by Central Board of Secondary Education with a **99.98** percentile
- Secured a place among top **1**% scorers in the **National Standard Examination in Physics (NSEP)** of 2013 in India and subsequently selected for the Indian National Physics Olympiad (**INPHO**) 2013
- Secured a place among top **1**% scorers in the **National Standard Examination in Chemistry(NSEC)** of 2013 in India and subsequently selected for the Indian National Chemistry Olympiad (**INCHO**) 2013
- Obtained an All India Rank of **86** in **Kishore Vaigyanik Protsahan Yojana** - 2014 i.e **KVPY** and was selected for fellowship after successfully clearing the written test as well as the Interview round
- Received Certificate of Appreciation from HRD ministry for excellent performance in senior school (class XII) examination
- Recieved Certificate of Merit for Outstanding performance and for being among the top **0.1**% of successful candidates in **Chemistry** in senior school (Class XII)
- Secured **98.56** Percentile score in quantitative reasoning in **Problem Solving and Assessment Examination** conducted by the Central Board of secondary education in Class XI
- Attained an All India rank of **159** in the final round of the **13th National Science Olympiad** conducted by the Science Olympiad Foundation and awarded a Certificate for distinctive performance in the competition

Technical Skills

- **Languages:** Go, C, C++, Python, PHP, HTML, CSS, Shell Scripting, Verilog, Assembly
- **Developement Frameworks:** CakePHP
- **Databases** : MongoDB, MySQL, Redis Server
- **Software** & **Utilities:** GNU Octave, Git, LaTeX, Markdown, Vim, AutoCAD

Previous Research Projects

- **Recommendation Engine Design** *(May'16)*
  Summer Internship, Knoctowl technologies, an e-learning startup
  Designed a Recommendation engine to help students in their studies by recommending content, most suitable to them.
  - Formulated design for user-user similarity using memory and model based *Collaborative filtering algorithms*
  - Proposed different models to estimate students' proficiency and questions' difficulty
  - Tested and analysed the proposed models implemented in Python, on real world data, using *machine learning algorithms*
- **Extremal Combinatorics and Extremal Graph Theory** *(Sep'15-Dec'15)*
  Prof. Rajat Mittal, Assistant Professor, IIT Kanpur
  - Analyzed families of subsets of a set satisfying certain restrictions
  - Explored various theorems relating to bounds on sizes of certain families of subsets
  - Studied different graph invariants, such as order, size and girth
  - Studied influence of global properties of a graph on local substructures of the graph

Other Projects

- **[Web-backend Developement] Go + MongoDB**
  Summer Internship, Knoctowl Technologies, an e-learning startup *(June'16-July'16)*
  Implemented following scalable systems in Go langauge (about 2K lines of Go code) with MVC based frameworks using MongoDB and MySQL databases.
  - Question Recommendation service providing most relevant user specific questions, based on proposed features
  - Integrated testing and practice sections to detect and update user weaknesses with the help of the proposed linear model
  - Bookmark Service allowing students to bookmark questions and review them
  - Judging system to collect implicit student feedback on given questions
- **Flying Raptor** (*March'16-April'16*)
  Course Project, TA202, Manufacturing Processes-II
  - Working model depicting bird's flying mechanism was constructed
  - Manufacturing processes like milling, lathe, cutting, drilling were used
  - Internal gears were fabricated to allow complex elliptical motion
  - Awarded overall 3^{rd} best project out of around 400 students.
- **Gramophone Model** (*Sep'15-Dec'15*)
  Course Project, TA201, Manufacturing Processes-I
  - A miniature model of a Gramophone was made using cast iron rods and metal sheets
  - Fabricated by using metallurgical processes like welding, brazing, sheet metal forming, grinding and casting

Key Courses Undertaken

Algorithms-II*
Theory of computation*
Data Structures and Algorithms
Probability and Statistics
Linear Algebra and Differential Equations
Discrete Mathematics
Abstract Algebra
Logic for Computer Science
Introduction to Electrical Engineering
Operating Systems*
Computing Laboratorys-II*
Computer Organisation
Computing Laboratorys-I
Fundamentals of Computing
Engineering Graphics
Introduction to Philosophy
Linear Algebra

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* On going Courses

Positions of Responsibility

- **Senior Security Officer , Antaragini 2015** *(March'15)*
  - Managed the logistics of security arrangements for various shows/functions taking place during the cultural fest.
  - ensured the smooth conduct of professional nights by making suitable security plans and arrangements for a crowd of more than 3000 people.

Extra Curricular Activities

- Served as NCC Cadet
  - Active participant of the various performances during national festivals like Independence Day and Republic Day
  - Participated in the SLR Rifle Shooting workshop conducted by 2 UP CTR NCC Kanpur
  - do Swimming and play pool,basketball,football as hobbies.