Saurav Kumar

Final Year Undergraduate

Computer Science and Engineering

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EDUCATION

EXAMINATION	UNIVERSITY	INSTITUTE	YEAR	CPI/%
Graduation	IIT Kanpur	IIT Kanpur	2016(expected)	8.1*/10.0
Intermediate(+2)	CBSE	Chinmaya Vidyalaya	2012	94.8%
Matriculation	CBSE	Chinmaya Vidyalaya	2010	10.0/10.0

* at the end of sixth semester.

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 187** in IITJEE-2012 among 4.5 lakh students.
- Secured **All India Rank 97** in AIEEE-2012 among 1.2 million students.
- Qualified for **ACM ICPC** (International Collegiate Programming Contest) Kharagpur Regionals 2014.
- Qualified for **ACM ICPC** Amritapuri Regionals 2013.
- Shortlisted for the **Aditya Birla Scholarships** in 2012.
- Awarded **Best Student (Academics)** Award 2012 by Chinmaya Vidyalaya, Bokaro.
- Stood National **top 1%** in **CBSE** Senior School Certificate Examination 2012.
- Declared successful in **Indian National Mathematical Olympiad** (INMO) in 2011 and 2012, conducted by Homi Bhabha Centre for Science Education (**HBCSE**).
- Secured National **top 1%** in National Standard Examinations in Physics (**NSEP**) 2011-12, Chemistry (**NSEC**) 2011-12 and Astronomy (**NSEA**) 2011-12 conducted by **HBCSE**.
- Secured **All India Rank 2** in 2009 and **All India Rank 1** in 2010 in National Cyber Olympiad (**NCO**) organised by Science Olympiad Foundation.
- Secured **All India Rank 10** in 2011 and **All India Rank 28** in 2012 in National Science Olympiad (**NSO**) organised by Science Olympiad Foundation.
- Awarded **DST Medal** in IGNOU-UNESCO Science Olympiad 2010.
- Awarded **KVPY (Kishore Vaigyanik Protsahan Yojna) Fellowship** in 2010 by Department of Science and Technology, Government of India.
- Awarded **NTSE Scholarship** based on National Talent Search Examination in 2008 by NCERT, Government of India.

INTERNSHIPS

- **LinkedIn, Bangalore**
  Content Filtering Tools   *May 2015 - July 2015*
  - Developed two internal tools for Content Filtering Team using Play Framework for Java, RestLi, ParSeq, Couchbase and internal email tool.
  - The first tool ran all the text spam classifiers and presented the summary with scores and confidences
  - The second tool identified specific parts of the content which contributed more towards the spam score of the text content, and highlighted them proportional to the score.

- **Aurus Networks, Bangalore**
  SuperProfs Web Application and API Development   *May 2014 - June 2014*
  - Development of website and related APIs for SuperProfs.com, an online platform for exam preparation.
  - Creation of portal for professors to create courses, update profile and view transactions; course review and rating; related APIs for data of users and courses.

PROJECTS AND DEVELOPMENTS	• **[Machine Learning] Sentiment Analysis in Movie Reviews** *Course Project in Machine Learning under Dr. Harish Karnick* *April 2015* The task, from Kaggle, was to predict the sentiment of a movie review from the test set based on the training set that was provided from the IMDb set of movie reviews.

• **[Machine Learning] Sentiment Analysis in Movie Reviews**
Course Project in Machine Learning under Dr. Harish Karnick   *April 2015*
The task, from Kaggle, was to predict the sentiment of a movie review from the test set based on the training set that was provided from the IMDb set of movie reviews.

• **[Distributed B+ Tree] Efficient key distribution technique in distributed B+ Trees**
Course Project in Advanced Databases under Dr. Arnab Bhattacharya   *March 2015*
The aim was to implement a B+ Tree index structure over a distributed multi-node network; and to devise an efficient distribution of nodes and analyze its performance. Efficient key distribution is done using the domain knowledge of queries and mapping more frequent keys to *better* servers.

• **[Compilers] Compiler for Python**
Course Project in Compiler Design under Dr. Subhajit Roy   *Jan 2015 - Apr 2015*
An end-to-end compiler for Python in the MIPS architecture with support for loops, recursions, nested functions and type inference implemented in Python.
Github Link: `http://github.com/2020saurav/py-codegen`

• **[Operating Systems] NachOS**
Course Project in Operating Systems under Dr. Mainak Chaudhari   *Aug 2014 - Nov 2014*
Extended the standard system call library of NachOS; implemented process scheduling algorithms such as UNIX scheduling, Round Robin, Shortest Job First and Non Pre-emptive; implemented page replacement algorithms such as Random Page Allocation, FIFO, LRU and LRU Clock.

• **[Computer Vision and Robotics] Bot Automation using Raspberry Pi**
Summer Project under Programming Club   *May 2013*
Automated a bot with on-board web-camera to search a green ball and to reach near it using Raspberry Pi's GPIO, OpenCV libraries for image processing in Python.
Github Link: `http://github.com/2020saurav/raspi`

SKILLS AND INTERESTS

• ***Languages:*** C++, Python, Java, Haskell, R, Bash, Verilog, Assembly
• ***Web Development:*** Play, NodeJS, Yii, PHP, SQL, NoSQL
• ***Tools:*** Android SDK, LaTeX, GNU Octave, Git, SVN, OpenCV

KEY COURSES UNDERTAKEN

• ***Core:*** Fundamentals of Computer Science, Data Structure and Algorithms, Logic for Computer Science, Computer Organization, Discrete Maths, Abstract Algebra, Theory of Computation, Operating Systems, Compiler Design, Principles of Databases, Searching and Indexing in Databases, Machine Learning, Functional Programming*, Principles of Programming Languages*, Game Theory*

• ***Breadth:*** Multivariable Calculus, Linear Algebra, Ordinary Differential Equation, Complex Analysis, Introduction to Electronics, Probability and Statistics, Introduction to Electrical Engineering

* to be completed in November 2015.

POSITIONS OF RESPONSIBILITY

• **Co-ordinator,** *Association of Computing Activities(ACA), IIT Kanpur*   *Aug'14 - July'15*
Organizing League of Programmers lecture series, maintaining Online Judge, organizing events such as *Microsoft code.fun.do*, Happy Hours and departmental freshers.

• **Web-Executive,** *Science & Technology Council, IIT Kanpur*   *Apr'13 - Mar'14*
Development of SnT Blog, and updation of council homepage.

• **Secretary,** *Programming Club, IIT Kanpur*   *May'13 - Apr'14*
Worked with a team of 17 for smooth conduction of various activities of the club and organizing workshops for freshmen for various events.