

Saksham Sharma

Computer Science and Engineering – IIT Kanpur

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Educational Qualifications

Bachelor of Technology : Indian Institute of Technology Kanpur - CPI: 10.0/10.0	July'14-Present
Senior Secondary - CBSE : D.A.V. Public School, Amritsar - Overall percentage: 97.6%	2014
Secondary - CBSE : D.A.V. Public School, Amritsar - Overall grade: 10.0/10.0	2014

Academic Achievements and Scholarships

○ Institute Rank 1 , IIT Kanpur (CPI 10.0/10.0 in all 4 semesters)	2014-Present
○ All India Rank 10 in Joint Entrance Exam Mains 2014 among 1.5 million candidates	2014
○ All India Rank 138 in Joint Entrance Exam Advanced 2014 among 150,000 candidates	2014
○ Academic Excellence Award, IIT Kanpur	2014-15
○ Aditya Birla Group Scholarship recipient, awarded to 15 IIT freshmen.	2014
○ Kishore Vigyanik Protsahn Yojna (KVPY) Scholar, Dept of Science and Technology, Govt of India	2013
○ National Talent Search (NTSE) Scholarship awardee, by NCERT, Govt of India	2010
○ National top 400 in National Standard Examination in Physics in grade 11 and 12.	2012-13
○ Selected for INSPIRE Scholarship Scheme (Dept of Science and Technology, Govt of India).	2014

Projects and competitions

○ Automated Accuracy improvement for Floating Point Expressions <i>Max Planck Institute for Software Systems, under Dr. Eva Darulová</i> <ul style="list-style-type: none">- Developed and evaluated a tool (in Scala) to rewrite mathematical expressions to lower floating point errors, thus improve accuracy for scientific and embedded applications- Obtained successful results, improving expressions by 50%, tested on expressions from various sources- Part of a larger tool being developed to optimize numerical programs- Gave a talk on the same to the Programming Languages group	May'2016-July'2016
○ Full Stack Developer IIT Kanpur <ul style="list-style-type: none">- Working on a scaleable web-app in a polyglot environment; using Scala with Akka, Elasticsearch, TypeScript, Node.js, Haskell, Angular2- Implemented various functionalities on the backend and frontend, managing infra- Designed a complete search functionality implemented using Elasticsearch, Node.js, Scala and TypeScript	May'2015-Present
○ Microsoft code.fun.do 2014 and 2015 Winning team member twice <ul style="list-style-type: none">- <i>Fresher</i> Designed a graphing app to plot implicit 2D mathematical functions for Windows Phone.- <i>Sophomore</i> Made a frontend to an open source program simulation code for Microsoft Windows.	Jan'2015 and Sep'2016
○ ABU Robocon 2015 Supervisor: Dr. Bhaskar Dasgupta <ul style="list-style-type: none">- Worked on making 2 semi-autonomous robots capable of playing badminton on a full court.- Image-processing to track the shuttle, predict trajectory. Used Arduino and Odroid for robot control.- Used stereo-vision, and later Microsoft Kinect to source depth data.- Finished 11th among 85 teams from all over India, at ABU Robocon '15, Pune	Oct'2014-Mar'2015
○ Microsoft Build The Shield 2016 Capture The Flag hacking contest <ul style="list-style-type: none">- Qualified National Online round, a Capture The Flag (CTF) competition focused on Security and Offensive Hacking- National 10th in the onsite finals at Microsoft Campus Hyderabad	Mar'2015
○ Microsoft code.fun.do Finalists Forum 2015 National 5th in Coding Milestone <ul style="list-style-type: none">- Developed an app to help users learn programming in their spare time.- Implemented a frontend app using C# for Windows Phone- Wrote backend web service (Online Judge) in Node.js to compile, run and verify user submitted programs.	May'2015-Jul'2015

Work and Volunteer Experience

- **Development Intern** *under DoFA IIT Kanpur, Prof. Manindra Agarwal* May'15-July'15
 - Was adjudged as one of the best interns as a freshman.
 - Worked on a scaleable web application with a large technology stack.
- **Coordinator** *Programming Club, IIT Kanpur* Apr'16-Present
 - Rewrote, deployed and populated Programming Club website pclub.in
 - Helped organize the Science and Technology Council Summer Camp '16
- **Secretary** *Programming Club, IIT Kanpur* Apr'15-Present
 - Organized Freshers' Programming Contest, setting and testing algorithmic questions.
 - Conducted beginner programming workshops for students.
 - Promoted Linux use and Installed Linux on multiple systems during Linux Installation Fest.
 - Organized Freshers' Programming Contest, programming workshops and Linux Install Fest
- **Software Corner Manager** *Techkriti '16, IIT Kanpur* Dec'15-Mar'16
 - Designed and implemented a new Esoteric Programming language based on Assembly, and hosted a national level competition on the same.
 - Wrote an Online Judge for a National High Performance Computing competition, hosted on CDAC's Param Yuva II Supercomputer.
 - Handled logistics and organization of multiple other Software related events.
- **Technical Secretary** *Association for Computing Activities, IIT Kanpur* Aug'15-Present
 - Helped in increasing familiarity of Computer Science Freshers with their department
 - Mentored a group of 5 students for a semester project on Introduction to Functional Programming
- **Student Guide** *Counselling Service, IIT Kanpur* July'15-Present
 - Helped 9 students adjust to the rigours of college life, by providing emotional support along with counselling.
 - Organized the Orientation Programme '15 for the fresher batch.

Technical Skills

Web Development	Node.js (with Express), JavaScript, Scala (with Akka), Angular
Programming Languages	C/C++, Scala, Python, Haskell, Java, Lisp, x86 Assembly
Operating Systems	Gentoo Linux, Arch Linux, Ubuntu, Microsoft Windows
Utilities	Emacs and Vim both, Git, GDB, Shell Utilities and scripting in Linux, \LaTeX
Platforms	Windows Phone, Microsoft Kinect, Arduino

Relevant Courses

Data Structures and Algorithms (A*)	Computer Organization (A*)	Introduction to Programming (A*)
Tools for Computing (A*)	Computer Systems Security (A)	Discrete Mathematics (A)
Abstract Algebra (A)	Logic in Computer Science (A)	Probability and Statistics (A)
A* grade for exceptional performance		

Interests

Computer Systems Security	Open Source Development	Programming Languages and Approximation
Functional Programming	Web Development	Linux System administration
Capture the Flag contests		

Miscellaneous

- Sporadic blogger at my blog <http://acehack.org> about Linux, programming etc
- Occasional contributor to public Open Source projects on Github <https://github.com/sakshamsharma>.
- Multiple personal projects on Github, including blogs, an Emacs plugin, utility repositories.
- Administer various servers in IIT Kanpur, including the community Gentoo mirror, a Gentoo-based Navya server, and the server VM of Programming Club. Deploy and automate services for campus
- Attended a full paper-reading seminar-like course on Approximate Computing during Summer '16 at the Max Planck Institute, Germany
- A Linux Enthusiast, tinker around and tweak my Linux installation in my free time