

Saksham Sharma

Computer Science and Engineering
Bachelor of Technology
Indian Institute of Technology Kanpur



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EXPERIENCE AND PROJECTS

Accuracy Improvement of Expressions

*Max Plank Institute for Software Systems, Germany
Fellowship, under Dr. Eva Darulová May'16-July-16*

- Developed and evaluated a Scala tool to rewrite mathematical floating-point expressions and increase their accuracy using a genetic algorithm
- Obtained successful results, improving expression errors by ~50%, useful for scientific and embedded applications.

Full Stack Developer *May'15-Present*
Internship under DoFA IIT Kanpur

- Adjudged as one of the best interns as a freshman
- Implemented various features in a large scale polyglot web application with an extensive technology stack in a team setup (Phabricator, Git)
- Continue coding, as a full-stack developer; managing the search component in Node.js, Scala, Elasticsearch, Angular, TypeScript

HTTP-Over-Protocol *Prof. Sandeep Shukla*

- HTTP wrapper for bypassing proxy restrictions and using arbitrary protocols (acehack.org/hop)
- Top 5 on Github trending (C++) for 2 days

Coordinator *Programming Club and InfoSecIITK*

- Rewrote, deployed, populated club website pclub.in
- Organized Programming contests, workshops, CTFs and took lectures on programming topics

Software Manager *Techkriti 2016, IIT Kanpur*

- Made an esoteric language for a national competition based on x86 assembly
- Made online judge for High Performance Computing contest on the Param supercomputer

Member, Team Robocon *Oct'14-Mar'15*
ABU Robocon '15, Dr. Bhaskardas Gupta

- Worked on 2 semi-autonomous full-size badminton playing bots using Image-processing, Kinect and Stereo Vision to track and predict shuttle path
- Finished 11th among 85 participating teams on a National Level

Winner twice *Microsoft code.fun.do hackathon*

- An app to parse, plot implicit mathematical graphs
- National 5th in Finals Coding milestone. Platform to learn programming, on a self made online judge

INTERESTS

Systems Security, Networks, Open Source,
Functional Programming, Web Development

EDUCATION

2014 – Now **Bachelor of Technology**
IIT KANPUR

CPI/GPA: 10.0/10.0

2014 **Senior Secondary Grade 12**
Score: 97.6%

AWARDS AND ACHIEVEMENTS

2014-16 **Institute Rank 1, IIT Kanpur**
CPI: 10.0 in 4 Semesters

2015 **Academic Excellence Award**
IIT Kanpur, 2014-2015

2014 **All India Rank 10**
JEE Mains, 1.5 million candidates

2014 **All India Rank 138**
JEE Advanced, 150,000 candidates

2014 **Aditya Birla Scholarship**
Among 15 IITans selected

2013 **KVPY Scholarship awardee**
Scholarship by Govt. of India

2010 **National Talent Search (NTS)**
Scholarship by Govt. of India

COURSEWORK

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, Logic	A
Probability and Statistics	A

A* grade for exceptional performance

TECHNICAL SKILLS

C/C++, Scala, Python, Node.js, Haskell, Lisp

WEB Express.js, Akka, JavaScript,
TypeScript, Angular

O.S. Gentoo, Arch Linux, Ubuntu

UTILITIES Emacs and Vim both, L^AT_EX, Linux
Shell utilities, Git, Docker,
Kubernetes, GDB, Elasticsearch

MISCELLANEOUS

- **Blog** about Linux, programming at acehack.org
- Contribute to **Open Source** on Github
- Administer servers in IIT Kanpur; deploying, automating services for campus community
- Microsoft Build The Shield, National 10th in the final round of CTF