# Saksham Sharma

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

#### EXPERIENCE AND PROJECTS

## Accuracy Improvement of Expressions

Max Plank Institute for Software Systems, Germany Fellowship May'16-July-16

- Developed and evaluated a Scala tool to rewrite mathematical floating-point expressions to increase accuracy using a genetic algorithm
- Obtained successful results, improving expression error 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
- Allows using arbitrary protocols behind a proxy
- Website and code at acehack.org/hop

## 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

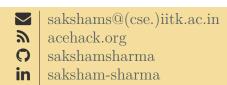
- Worked on 2 semi-autonomous full-size badminton playing bots using Image-processing, Kinect and Stereo Vision to track and predict shuttle path
- Finished 11th among 85 participating teams on a National Level

## Winning team twice Microsoft code.fun.do

- An app to parse, plot implicit mathematical graphs
- National 5th in Finals Coding milestone. Platform to learn programming, on our 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

 $A^*$ Data Structures and Algorithms  $A^*$ Computer Organization Introduction to Programming  $A^*$ Tools for Computing A\* Computer Systems Security Α Discrete Mathematics Α Abstract Algebra, Logic Α Probability and Statistics Α

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, LATEX, Linux
Shell utilities, Git, Docker,
Kubernetes, GDB, ElasticSearch

#### Miscellaneous

- Blog about Linux, programming etc here
- 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