

# Tushar Garg

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## EDUCATION

### IIT KANPUR

B.TECH IN MECHANICAL ENG.  
MINOR IN THEORY OF CS  
2016 - 2020 | Kanpur, India  
Cum. GPA: 8.1/10

### S.V.M. INTER COLLEGE

SENIOR SECONDARY (XII)  
2016 | Uttarakhand, India  
Percentage: 89.2

## LINKS

Codeforces:// [tushartg](https://codeforces.com/profile/tushartg)  
Codechef:// [tushar\\_garg](https://www.codechef.com/users/tushar_garg)  
Hackerearth:// [tushar\\_garg](https://www.hackerearth.com/@tushar_garg)

## COURSEWORK

### GRADUATE-LEVEL

Modern Cryptology (A\*)  
Introduction to Machine Learning (A)  
Topics in Topology (A)  
Geophysical Flows Theory & Comp.

### UNDERGRADUATE-LEVEL

Fundamental of Computing (A)  
Data Structure and Algorithms (A)  
Probability and Statistics (A)  
Theory of Computation  
Abstract Algebra  
A\*: Outstanding performance  
A: Excellent performance

## SKILLS

### PROGRAMMING

Proficient:  
C • C++ • Scala • PHP • Python  
Familiar:  
Java • HTML • CSS • JavaScript

### FRAMEWORK

Lumen • Laravel • ReactJS  
Play • Flask

### UTILITIES

TeX • Git • Github • GitLab  
Docker • Kubernetes • Spark

### PROGRAMMING PARADIGM

Functional • Object Oriented

### OPERATING SYSTEMS

Mac • Windows • Linux

## EXPERIENCE

### Devo | SENIOR SOFTWARE ENGINEER

Sep 2021 - Present | Noida, INDIA

- Build UEBA product from scratch in Flask Framework with CICD pipelines.
- Scaled out the application using GUnicorn server and used redis for caching.
- Worked on Spark to reduce the memory pressure due to collecting data in memory. Also, achieved 50% reduction in time for about a million row input.
- Worked on Actor model based Akka library in Scala and Lomond (Websocket library) in python to improve the reliability of Remote Agent tool which ensure communication from customer VPC to LogicHub VPC.

### LogicHub (Acquired by Devo) | SOFTWARE ENGINEER

June 2021 - Present | Noida, INDIA

- Developed reminder feature using Quartz Library. Learnt Scala, functional & concurrent programming, Play framework, Slick FRM in the process.
- Worked on Docker, postgresQL, Sumo Logic, OOM issues during on call PIs.
- Fixed ton of bugs which required working on Query parser similar to JQL using Context Free Grammar, and setting ADFS server for on-prem SSO using SAML.
- Responsible for project completion of 3, Six month interns with doubt clearing.

### VMock | SOFTWARE ENGINEER

Sep 2020 - June 2021 | GURUGRAM, INDIA

- Developed backend of Appointment booking Module from scratch in Lumen framework which had floating working hour, notes sharing, feedback features.
- Synced the applications internal calendar with the users personal Google and Outlook Calendar using Nylas APIs.
- Developed a full-stack User and Task Management System with backend in Lumen and frontend in ReactJS in a training period of one month.

## PROJECTS

### MODERN CRYPTOLOGY

Mentor: Prof. Manindra Agrawal | Jan 2020 - July 2020

- Leveraged knowledge in Finite Fields and Group Theory to analyse EAEAE structure and break it using a well known attack, the Square attack, for AES.
- Analyzed a variant of Keccak hash function and found the inverses of linear functions in it. Devised preimage, collision and second-preimage attack for a special case of sponge function.

### SQUARED SVM SOLVER & RECOMMENDATION SYSTEM

Mentor: Prof. Purushottam Kar | Aug 2019 - Nov 2019

- Read the paper on creating a Recommendation system based on propensity scored losses (PfastreXML and FastXML), which suggests rare labels for Wikipedia article and rare item for Amazon users, and trained the model on available codes.

## AWARDS & ACHIEVEMENTS

- Expert on Codeforces. Best ranked 386 among 4500 participants.
- Rated 4 star on CodeChef with a global ranking of 3161.
- AIR 1180 in JEE(Advanced)-2016, AIR 1876 in JEE(Mains)-2016.
- 24th rank in Uttarakhand Board in Senior Secondary Exam, 2016.
- Among Top 1% in State in National Level Olympiad in Physics as well as Chemistry, Indian Association of Physics Teacher (IAPT).