Rahul Gupta

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EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY, KANPUR
Dual Degree (B.Tech-M.Tech) in Computer Science
Expected July 2019
CPI: 8.8

DAV PUBLIC SCHOOL
2014 | Kota, Raj, India
Class 12 (CBSE)
94.6 %
2012 | Kota, Raj, India
Class 10 (CBSE)
CGPI : 10

LINKS
Github:// **rahulguptakota**
Bitbucket:// **grahul_iitk**
LinkedIn:// **rahul-gupta**

COURSEWORK

COMPUTER SCIENCE
Computer Systems Security
Machine Learning Techniques
Computer Networks
Compilers
Operating Systems
Data Structures and Algorithms
Database Management Systems
Computer Organization
Theory of Computation

MATHEMATICS
Discreet Mathematics
Probability and Statistics
Real and Multivariable Calculus
Linear Algebra
Abstract Algebra
Differential Equations

OTHER COURSES
Linguistic Universals and Typology

SKILLS

PROGRAMMING
Languages:
C • C++ • Python • Matlab • HTML
• CSS • PHP • JavaScript • BASH
• SQL • LaTeX
Tools/Libraries:
Git • Visual Studio • Django • Tkinter

SCHOLASTIC ACHIEVEMENTS
- Secured AIR – 174 among 1.26 lakh students in IIT-JEE 2014
- Awarded Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship in Stream SX
- Secured Rank – 4 in statewide Pre Engineering Test (RPET) 2014

PROJECTS & INTERNSHIPS

MICROSOFT - IT, HYDERABAD | Migration of Partner Memberbership Center Users to Partner Center
May 2017 – July 2017
- Studied and Analyzed web architecture of Partner Center
- Formulated design and proof of concept to make a responsive UI using Localization, WebCore CSS and Angular JS features
- Implemented Asynchronous Function Callbacks using $q service and posted data using $resource to REST API's for AAD account creation
- Thoroughly tested functionality of written code by using Jasmine tests
- All code was reviewed, perfected, and pushed to production

BLOCKCHAIN | Distributed App to Log User Activity on OARS
Aug 2017 – Nov 2017
- Aimed at logging activities of students, professors and admins on Online Academic Registration System
- Used PKI on a permissioned and distributed blockchain using Multichain
- Implemented Principal of Least Privileges on a central MySQL server and a permission server for blockchain stream

CYBER SECURITY | Securing Zoobar Web Server
Jan 2017 – Apr 2017
- Studied architecture of Zoobar Web Server based on OKWS model for building fast and secure web services
- Exploited security vulnerabilities using Control Hijacking Techniques, Privilege Escalation Techniques, Buffer Overflow and browser-based attacks like SQL Injection, Cross Site Scripting, Cross Site Request Forgery and Cookie Thefts
- Improved security of applications using Stack Canaries, Privilege Separation and Server-Side Sandboxing

COMPILERS | Compiler for Scala
Jan 2016 – Apr 2016
- Developed a Scala to NASM Compiler targeted at x86 architecture with support for basic operations, conditional and Iterative statements, arrays, type checking, basic type inference, nested functions and recursion
- Implemented Lexical Analyzer, Parser, Abstract Syntax Tree, Intermediate Code and Assembly Code Generator
- Incorporated extra features like default parameter values for functions/classes and lists storage type

OPERATING SYSTEMS | Extending NachOS
Aug 2016 – Nov 2016
- Implemented System calls pertaining to Fork, Exec, Join, Sleep and Exit
- Implemented UNIX, First in First Out, Round Robin and Shortest Job First job scheduling algorithms
- Implemented Shared Memory, Semaphores and Page Replacement Algorithms