RISHABH GARG

Computer Science And Engineering
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EDUCATION

B.Tech: CSE	Indian Institute of Technology Jodhpur	8.4/10	2012-16
AISSCE – Class 12th C.B.S.E	Govt Senior Sec School C.R Park	91%	2011
AISSE – Class 10th C.B.S.E	Don Bosco School(D.B.S)	93.4%	2009

ACADEMIC ACHIEVEMENTS

2015	· Secured **121 rank** in ACM-ICPC Amritapuri Online Regional Round.
2012	· Awarded **Indira Gandhi Award** for overall excellence in Zonal
2012	· Among top 0.6% students in JEE-2012(500,000 appearing) and top 0.09% students in AIEEE-2012(1,100,000 appearing)
2009	· Awarded **Excellence in Maths by C.B.S.E** (among the **top 0.1%** students all over India)
2009	· Got selected for the **Regional Maths Olympiad**

INTERNSHIPS

Commonfloor **End to end pipeline for different analytics for real time monitoring of business** May'15 - Jul'15	· The project focuses on real time analysis of the raw logs we have at Commonfloor. · Made use of various technologies such as **Apache Kafka, Apache Storm, Elastic search, Druid and Logstash.** · Built real time visualizations using **Kibana on top of Elasticsearch** and **Grafana over Druid**. · Made use of **Cassandra and Mongo** for deep storage for ensuring data reliability · Used Rest API's making used of **Play framework** and **JAVA** to make the dashboard and · Wrote custom scripts in Java and Python to push the data into various data warehouses avoiding data duplication · Designed and implemented databases using SQL, JavaScript.
Algorithm Explanation using Animations IIT Jodhpur May'14 - Jul'14	· Implemented standard algorithms in C++. · Made algorithms more interesting by implementing ANIMATIONS in **JAVA.** · Uploaded the algorithms and animations on a portal to be used both by faculty and students and making it easier for students to study **DATA STRUCTURES AND ALGORITHM course**

RESEARCH PROJECTS

Automated Classification of Fine-art Painting Style IIT Jodhpur Ongoing	· Classify paintings into different categories and sub-categories which can be utilized as an index and thus improve the speed of the retrieval process of paintings on internet · Automatically finds influences between artists · Recognizes the genre, era, artist, and identity of paintings for tourism and museum industry · Classification utilizes **low-level features** such as color, shades, texture, edges, shading, stroke pattern**; mid-level features** such as line styles, geometry, perspective; or **high-level features** such as objects presence, or scene decomposition.
Document Layout Analysis(Python) IIT Jodhpur July'15-Dec'15	· Developing a software to compare a query layout to a database of known layouts in order to find layouts that are similar. · Implemented a **block matching algorithm** based on Levenstein 2-D DP Edit distance problem. · The algorithm fetches the best match based on the minimum cost of insertion, deletion and substitution. · Made a portal using **Tkinter library** in python for users to upload the documents and compare. Extracted the features of the layouts in XML format

SCHOLASTIC ACHIEVEMENTS

MICROSOFT HACKATHON code.fun.do Feb'16	· Developed a bot for automating college tasks · The bot efficiently retrieved the mess as well as the bus queries such as the mess timetable, etc · Made use of Project Oxford API's, Azure DB and Cortana API's · Won second prize among 30 teams
MICROSOFT IMAGINE CUP Feb'16-April'16	· Selected in the National Finals of Imagine Cup'16 · The project is based on applying IOT on cars thus building a connected network of cars · This can be used as a surveillance system for finding missing people and things · Making use of Face Detection and Recognition API and Azure ML

PROGRAMMING AND SOFTWARE DEVELOPMENT

Elevator Simulator(JAVA) Jul'14-Aug'14	· Designed an efficient elevator simulator that can accept input from a user and mechanically operate (on a small scale) a system of 10 floors and 4 elevators. · Designed an algorithm that would predict which elevator could respond the fastest to a passenger request and assign the request to that elevator · The algorithm while assigning requests favors the elevator with the fewest other requests in order to split traffic evenly among the elevators and minimize time spent waiting to get off.
Railway Scheduler(JAVA) Aug'14-Sept'14	· Designed Software Requirement Specification for Railway Traffic Simulator · Optimized the system using Pipeline Effect and Dynamic Scheduling · Capable of doing various operations like tracking the train, locomotives and their dynamic characteristics, signaling protocols and signal · Made the GUI showing the proper arrival and departure of trains
Linux Shell Jan'15 - Feb'15	· Implemented UNIX shell supporting various Command line arguments in C++ · The Shell searches for the executable file using the environment variable path · Supported commands like- chdir, mkdir, rmdir, pwd, |(pipe), <(input), >(output), &(background process) and >>(output append)
Web App(Python) Apr'15 - May'15	· Implemented a web chat application with real time data exchange between multiple clients and the server · Used **Web Sockets with HTTP** thus providing full duplex connection · Differentiated between traditionally used practices such as **Long Polling and HTTP streaming** · Secured Network Traffic between WebSocket gateway and its clients and backend servers using the protocol **Transport Layer Security(TLS) also known as SSL**. · Ensured confidentiality, integrity and availability of the network connection
Process Scheduler Apr'15 - May'15	· Simulated a CPU Scheduler in C++ · Analysed the performance of FCFS, SJF, Priority Scheduling, Round Robin, Multilevel Feedback Queue scheduling
RSA Encryption and Decryption Apr'15 - May'15	· Developed a C++ program for encrypting and decrypting data using RSA keys. · The program used modular exponentiation to reduce time and space complexity while handling large digit numbers, resulting in faster encryption/decryption.

POSITIONS OF RESPONSIBILITY

Festival Coordinator, Ignus'15	· Led a team of 35 heads, 150+ members to yield the largest institute celebration of Rajasthan · Initiated professional relations with corporate executives attracting a sum of 4.8 Million for the festival attaining increase by 25% from the last year. · Reinforced the festival prologue with a parallel structured publicity drive to pull in a participation of 7000+ students (75% increase) from 91+ colleges from all over India
Head Web-Designing, Varchas Aug'13-Mar'14	· Developed the entire site for the Sports Fest of our college · Designed the database for easy analysis · Worked on PHP, MySQL, JavaScript, JQuery
Head Programming Club Oct'14-Feb'15	· Responsible for organizing and arranging all the activities related to Programming · Organized and delivered various lectures and workshops in the field of Programming · Supervised the Budget Allocation and procurement of various equipment required for the club. · Lead a team of 6+ core members and 37 volunteers of the Programming Club to ensure smooth functioning of activities throughout the year

TECHNICAL SKILLS

· C, C++,Python, Django, Matlab, Java, Latex,,

EXTRA-CURRICULAR ACHIEVEMENTS

· Represented IIT Jodhpur at 49th Inter IIT Sports Meet held in IIT Guwahati
· Won Bronze in Varchas'13 which is the intra sports fest of IIT Jodhpur