## Rahul Kumar

# Computer Science & Engineering IIT Kanpur

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YEAR	DEGREE	INSTITUTION	
2013-2017	B.Tech	INDIAN INSTITUTE OF TECHNOLOGY KANPUR	
2012	XII, CBSE	KRISHNANAND MEMO ACADEMY, ASARGANJ MUNGER	
2010	X ,BSBE	TOWN HIGH SCHOOL , MUNGER	

#### **SCHOLASTIC ACHIEVEMENTS:**

- Scored **AIR-4762**, **SC Rank-67** and **SCPH RANK 1** in Joint Entrance Examination (Advanced) 2013 among 150 thousand aspirants
- Achieved 99.4 percentile in Joint Entrance Examination (Main) 2013 among 1.2 million candidates
- Secured Rank 5(SCPH) in Bihar Combined Entrance Competitive Examination Board 2012
- Awarded Best Section Project in TA201A-Manufacturing Processes course at IIT Kanpur

#### **TECHNICAL SKILLS:**

- **Programming:** C/C++, Python, MATLAB, shell, Assembly, Verilog, Gnu plot, OpenGL
- Web Development: HTML5, CSS, JavaScript, PHP, MYSQL
- Platforms: Linux(ubuntu), Windows
- Software and Utilities: SQL, Latex, Git, Blender, AutoCAD, Microsoft Office, phpMyAdmin

#### **PROJECTS:**

Operating Systems

## Course Project: NachOS

- Implemented basic system calls, process scheduling and synchronization, memory management in NachOS
- Completed by group of three students and instructed by Prof. Mainak Chaudhuri

#### Compiler Design

## Compiler for C language

- Implemented in Python for Assembly architecture for C programming language
- Designing of lexer, parser, intermediate code generator, run-time support and machine code generator
- Completed by group of single student and instructed by Prof. Amey Karkare

#### Introduction to Computer Graphic

#### Animation Project

- Designed Animation video project using Blender and OpenGL
- Completed by group of single student and instructed by Prof. Vinay P. Namboodiri

## Principles of Data Base Systems

#### IITK Student Search

- Designed search website where IITK students search all IITK students using HTML5, CSS, JavaScript, PHP, MYSQL and phpMyAdmin
- Completed by group of single student and instructed by Prof . Sumit Ganguly

#### Computer Systems Security

#### Cyber Security and Cyber Defense

- Discover software bugs that pose cyber security threats, explain and recreate exploits of such bugs in realizing a cyber attack on such software, and explain how to fix the bugs to mitigate such threats
- Discover cyber attack scenarios to web browsers, and web servers, explain various possible exploits, recreate cyber attacks on browsers, and servers with existing bugs, and explain how to mitigate such threats
- Discover and explain mobile software bugs posing cyber security threats, explain and recreate exploits, and explain mitigation techniques.
- Completed by group of single student and instructed by Prof . Sandeep Shukla

#### TA201A Manufacturing Project

#### Movable Bridge

- Designed & Fabricated working model of Movable Bridge able to move body part, using technique like milling, drilling and lathing Had motion in all three dimensions with a useful Mechanical Advantage
- Completed by group of six students and instructed by Prof . Shashank Shekhar

### TA202A Manufacturing Project

#### Mechanical Circus

- Constructed an automata of circus having rotating parts like discs, flags, etc. with a single power input
- Designed gears, cranks, etc. with appropriate measurements for stabilize movement of parts
- Utilized flats, rods, angles, metal sheets using turning, milling, facing, grinding and conventional cutting
- Completed by group of six students and instructed by Prof. V.K. Jain

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#### **RELEVENT COURSES:**

Data Structures & Algorithms	Operating Systems	Probability & Statistics
Management Information Systems	Algorithm II	Theory of Computation
Engineering Graphics	Introduction to Electronics	Discrete Mathematics
Computing Laboratory	Compiler Design	Fundamentals of Computing
Computer Organization	Principles of Database Systems	Logic in Computer Science
Computer Architecture	Computer systems Security	Introduction to Psychology
Introduction to Computer Graphic	Introduction to economics	Principles of Programming
		Language
Art Criticism : Theory and Practice	Human Right theory and	Introduction to sociology
	Practice	

## **EXTRA - CURRICULAR ACTIVITIES**

- Volunteer at Ritambhara Antaragni'13, IIT Kanpur
- Secretary at Ritambhara Antaragni'14 ,IIT Kanpur
- Executive Hospitality Techkriti'15,IIT Kanpur
- Participate PokerBaazi live Poker tournament and secured 2<sup>nd</sup> place at Antaragni'16 ,IIT Kanpur among 1500 participated

## **INTERESTS AND HOBBIES:**

- I love to sing
- Interested in classic movies of different genres
- I am good in poker, chess and carrom