# Ketan Gupta

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#### Education

# Indian Institute of Technology, Roorkee

Computer Science and Engineering Bachelors in Technology, 2015-2019 (Expected)

CGPA: 8.23/10

# Delhi Public School, Ranipur

PCM + Computer Science 2001-2015

- Senior Secondary CBSE Overall Percentage: 96.8%
- Secondary CBSE Overall CGPA: 9.8/10

#### Skills

# Algorithms and Data Structures

- Selected for IOITC (International Olympiad of Informatics Training Camp).
- Selected for ACM ICPC Amritapuri Asia 2015, 2016 and ICPC Chennai 2016 Regionals.
- Frequent participant in Coding Contests held on Codechef, Topcoder, Codeforces, USACO, Hacker Earth, etc. (Handle: ketanhwr)
- Member of Programming and Algorithms Group (PAG) at IIT Roorkee.
- Selected for Indian Programming Camp, Mumbai organized by CodeChef.

#### Web Development

- Web Developer at SDSLabs and WatchOut! News Agency.
- Experienced in LAMP Stack, XAMPP. Also worked in MEAN Stack and Django (Python)
- Worked on Backdoor (<a href="https://backdoor.sdslabs.co">https://erdos.sdslabs.co</a>), both made using vanilla PHP.
- Also contributed to Play (<a href="https://github.com/sdslabs/play">https://github.com/sdslabs/play</a>), made using node.js

#### Game Development

- Experienced in Unity3D game engine and made some Indie games in it.
- Experience in C++ Game Development. Made PONG, Angry Birds and Bounce without using any physics engine or graphics engine.
- Made many web games using HTML5 and JavaScript. Hosted some on GitHub. (Username: ketanhwr)

# **Projects**

Microsoft code.fun.do 2015

Made an app for Universal Windows Platform within 24 hours which helps doctors in tracing a health problem in someone's family tree using graph theory. Selected for top 5 ideas among 200 teams.

- Backdoor (https://backdoor.sdslabs.co)

A web app made in LAMP Stack for holding CTFs (Capture the Flag) competitions and for practicing network security skills.

Erdos (https://erdos.sdslabs.co)

A website similar to Project Euler (<a href="https://projecteuler.net/">https://projecteuler.net/</a>) made in LAMP Stack for holding competitive mathematics competitions.

- Reflexio (<a href="https://github.com/ketanhwr/reflexio">https://github.com/ketanhwr/reflexio</a>)

A web game based on reflection made purely in HTML5 and Javascript. Completed it for IndiaHacks Game Development Track. Finished among top 20 in around 10,000 participants.

http-server (https://github.com/ketanhwr/http-server)

A simple HTTP server written in C using UNIX sockets. Supports GET and HEAD requests.

### **Relevant Courses**

Fundamentals of Object Oriented Programming Differential and Integral Calculus

Introductiont to Computer Science and Engineering Optimization Techniques

Data Structures Discrete Structures

Object Oriented Analysis and Design Computer Architecture

Signals and Systems Digital Logic Design

# Academic Achievements and Scholarships

- All India Rank 448 in Joint Entrance Exam Advanced (2015) among 150,000 candidates.

- All India Rank 271 and State Rank 1 in Joint Entrance Exam Mains (2015) among 1.5 million candidates.

- National Talent Search Examination Scholarship (NTSE) awardee.

- Qualified Regional Mathematics Olympiad (RMO) and National Standard Examination in Astronomy.

## **Areas of Interest**

Algorithms and Data Structures

- Web Development

- Game Development

- Machine Learning
- Network Security
- Operating Systems
- Open Source Development

#### **Technical Skills**

Programming C/C++, Python, Java, JavaScript, PHP, C#, Perl, Ruby Game Dev Unity3D, Unreal Engine, HTML5/JS, C/C++, OpenGL

Web PHP (Vanilla, Laravel), Node.js (Express.js), JS (jQuery, Angular), Python (Django)

Utilites Vim, Git, GDB, Sublime Text, OpenGL, MATLAB

Platforms Arduino, Universal Windows Platform, Android, Linux

#### Co-curricular Activities

- Music enthusiast. Completed a 5 year course in Classical Vocal Music.
- District Level Badminton and Table Tennis player.
- Painter and Sketcher. Participated successfully in many school and district level competitions.