

# Shashwat Kathuria

Computer Science  
& Engineering,  
IIT Jodhpur

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Indian Institute Of Technology, Jodhpur  
Bachelor Of Technology (Expected 2021)  
3rd Year Undergraduate  
CGPA : **9.14/10** (Till 4th Semester)

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Phone : +91 - 9971383462  
Home : New Delhi, India

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## Interests

Data Structures And Algorithms, Android Application & Web Development, Machine Learning, Cryptography, Game Development

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## Technical Skills

### PROGRAMMING LANGUAGES

C, C++, Python, Java, Ruby, Lua, JavaScript

### WEB DEVELOPMENT

- Django, Flask, Ruby on Rails
- JavaScript, HTML, CSS, Bootstrap, Jinja
- PostgreSQL, SQLite, MongoDB

### ANDROID APPLICATION DEVELOPMENT

Android Studio, React Native

### UTILITIES

Git, SSH, Raspberry Pi, Microsoft Azure

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## Projects

- **Natural Language Processing**/ Machine Learning, NLTK, Scikit

Programmed various Hindi Part of Speech taggers using **Hidden Markov Model** and **Viterbi's Algorithm ( Bigram and Trigram )** and **Decision Tree Classifier Model** and achieved **92.85 %** accuracy.

- **IITJ HealthCare**/ Software Engineering, Web Development

An online health care assistance portal made using **Django (Python)** and **Bootstrap (HTML / CSS / JavaScript)** to help students get online prescriptions from doctors and availability regarding medicines through medical store.

- **Drawing Canvas**/ Web Development, JavaScript Application

An online drawing application made using **ReactJS, d3JS** and **Django (Python)** to help users draw anything and save or load the same by communicating with the server.

- **Pong**/ 2D Game Development

A multiplayer offline game made using the language **Lua** and framework **LÖVE2D**. The game involves saving the ball through either of the vertical sides with serves in between points obtained.

- **Disaster Safety App/** Android Application, Web Development

Programmed an android and web application to broadcast and get online alerts regarding earthquakes, floods and hurricanes by communicating to the server, using **Flask (Python)** and **Android Studio (Java)**.

- **Cryptography/** Python, C

Analyzed and programmed CBC **Padding Oracle** attack, hash verification of videos using **SHA-256**, CBC and CTR Modes **AES Decryption**, **Many Time Pass** hack along with a guessing heuristic, and various historic ciphers as a part of Cryptography I course under Professor Dan Boneh.

- **Data Structures And Algorithms /** Python, C++, C

Programmed a total of 38 programs in **Python**, **C++** and **C**, a major part of which was of the Stanford University Data Structures and Algorithms Specialization under Professor Tim Roughgarden.

- **Drag v/s Normal Projectile /** PyLab - Python

Graphical comparison of drag and normal particle projectiles using **PyLab** library in **Python**.

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## Education

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### G. D. Goenka Public School, New Delhi

Class 12, 2017

Central Board Of Secondary Education : **96%**

Class 10, 2015

Central Board of Secondary Education : **9.6 / 10**

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## Scholastic and Extracurricular Achievements

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- Data Structures and Algorithms 4 Course Specialization, Stanford University
  - Cryptography 1, Stanford University
  - MIT 6.00.1x Course, Massachusetts Institute of Technology
  - MIT 6.00.2x Course, Massachusetts Institute of Technology
  - CS50, Introduction to Computer Science, Harvard University
  - CS50, Web Programming with Python and JavaScript, Harvard University
  - CS50, Mobile App Development with React Native, Harvard University
  - GD50, Game Development, Harvard University
  - Android Specialization Udacity Course, Google
  - Former State Level Football Player, New Delhi
  - Football Inter - Zonals Winner, New Delhi
  - 4 - Time School Level Athletics Record Breaker
  - SAT Subject PCM Perfect Scorer - 2400 / 2400
  - SAT Score - 2100 / 2400
  - 3 - Time Scholastic Excellence Awardee
  - School Topper, Class 12 CBSE Exams
  - Participated in Various Olympiads, Trekking Camps

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## Positions of Responsibility

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- Vice Sports Captain, Class 11
  - Sports Captain, Class 12
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