

# Shashwat Kathuria

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## EDUCATION

<https://shashwatkathuria.github.io/>

**INDIAN INSTITUTE OF TECHNOLOGY, JODHPUR** | B.TECH. IN COMPUTER SCIENCE & ENGINEERING  
CGPA: 9.16/10 (Till 5th Semester) • Department Rank 3 • Pre Final Year, Expected 2021

**G. D. GOENKA PUBLIC SCHOOL, NEW DELHI** | CBSE  
Class 10, 2015 | CGPA: 9.6/10 • Class 12, 2017 | Percentage: 96%

## TECHNICAL SKILLS

**Programming:** C • C++ • Python • Java • JavaScript • Ruby • Lua

**Web Development:** Django • Ruby on Rails • Flask • HTML • CSS • JavaScript • Bootstrap  
• PostgreSQL • SQLite • MongoDB




**Mobile App Development:** Android Studio • React Native

**Utilities:** Git • Raspberry Pi • Microsoft Azure • Heroku • AWS • MongoDB Atlas

## EXPERIENCE


**GOOGLE SUMMER OF CODE** | WIKIMEDIA FOUNDATION 

May - September 2020 (\*Ongoing) | Blogs 

- Developed an **error tracking system** , surfaced the errors to UI  to keep users informed of update errors due to APIs, an **orphan lock removal procedure from background jobs**  and made course **data update process** more efficient.
- Implemented using **Ruby on Rails** and **ReactJS**.

**MICROSOFT** | SOFTWARE ENGINEER INTERN

May - July 2020 | Hyderabad | Microsoft Teams & SharePoint

- Worked at **Microsoft Garage**  and developed whole UI layer for a news application for iOS & Android from scratch using **React Native**.
- Integrated the application inside **Microsoft Teams** mobile application.

## PROJECTS

**INTELLIGENT TRAFFIC MANAGEMENT SYSTEM** | GITHUB , DEPLOYED , DEMO VIDEOS 

Internet of Things (IoT), Raspberry Pi, Web Development

- Developed **dynamic signal time allocation** according to real time traffic count, **detection of intruders on road**, **audio detection of gunshots** and an **RFID based traffic penalty system** along with website.
- Implemented using **Raspberry Pi**, **PiCamera**, **RFID sensors**, **microphone**, **TensorFlow**, **OpenCV** & **Django**, **Bootstrap** (HTML / CSS / Javascript) for traffic penalty system (deployed on **Heroku**).

**SOCIALCLOUD** | GITHUB , DEPLOYED 

Web Development

- Developed an **online social media website** for users to post images and follow others, like **Instagram**.
- Implemented using **Ruby on Rails**, a combination of **MongoDB**, **PostgreSQL** and **SQLite**, **AngularJS** and **Bootstrap** (HTML / CSS / JavaScript) and deployed on **Heroku**.

**DRAWING CANVAS** | GITHUB , DEPLOYED 

Web Development, JavaScript Application

- Developed an **online drawing application** to help users **draw**, **save** and **load** their drawings.
- Implemented using **ReactJS**, **d3JS**, a combination of **SQLite** / **PostgreSQL**, **Django** and **Bootstrap** (HTML / CSS / JavaScript) and deployed on **Heroku**.

## PART OF SPEECH TAGGING | [GITHUB](#)

Natural Language Processing, Machine Learning

- Developed Hindi **Part of Speech Taggers** using **Hidden Markov Model** with **Viterbi's Algorithm** (**Bigram and Trigram**), **Decision Tree Classifier Model Tagger** and achieved **92.85 %** accuracy.
- Implemented using **Python**, **Scikit** and **NLTK**.

## SERVERLESS CHAT APPLICATION | [GITHUB](#), [DEPLOYED](#)

Serverless Architecture, Web Development

- Developed a **chat application** allowing users to **chat one-to-one** and **in groups**.
- Implemented using **NodeJS (Serverless Side)**, **AWS S3 & DynamoDB & Lambda** and **Bootstrap (HTML / CSS / JavaScript)** and deployed on **AWS**.

## PONG, FLAPPY BIRD | [GITHUB PONG](#), [GITHUB FLAPPY BIRD](#)

2D Game Development

- Programmed remakes of respective games.
- Implemented using **Lua** and **LÖVE2D** framework.

## IITJ HEALTHCARE | [GITHUB](#), [DEPLOYED](#), [DEMO VIDEO](#)

Software Engineering, Web Development

- Developed an **online health care assistance portal** to help students get **online prescriptions** from **doctors** and **availability of medicines** in medical store.
- Implemented using **Django**, a combination of **SQLite / PostgreSQL** and **Bootstrap (HTML / CSS / JavaScript)** and deployed on **Heroku**.

## DISASTER SAFETY | [GITHUB ANDROID APP](#), [GITHUB WEB APP](#)

Android App Development, Web Development

- Developed an android and a web application to **broadcast** and **get online alerts** regarding **earthquakes, floods and hurricanes**.
- Implemented using **Android Studio (Java)** and **Flask**.

## DRAG V/S NORMAL PROJECTILE | [GITHUB](#)

PyLab, Python

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

## ACHIEVEMENTS

### SCHOLASTIC

- **Rank 2471, JEE Main & Rank 2848, JEE Advanced**, among top 0.2% of 1.2 million participants
- Online course certifications: **Data Structures & Algorithms Specialization (4 Courses)** (Stanford University), **Cryptography 1** (Stanford University), **MIT 6.00.1x & 6.00.2x Course** (Massachusetts Institute of Technology) & **CS50** (Harvard University)
- **SAT Subject PCM Perfect Scorer - 2400 / 2400**
- **3 - Time School Scholastic Excellence Awardee**
- **School Topper**, Class 12 CBSE Exams

### EXTRACURRICULAR

- Former **School & Zonal (New Delhi) Level Football Player**
- **Football Inter - Zonals Winner**, New Delhi
- Won **17 Awards in School Level Sports**
- Participated in Various Olympiads, Trekking Camps

## POSITIONS OF RESPONSIBILITY

- **Vice Sports Captain** | Class 11
- **Sports Captain** | Class 12