Shashwat Kathuria

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EDUCATION

https://shashwatkathuria.github.io/

INDIAN INSTITUTE OF TECHNOLOGY, JODHPUR | Pre Final Year B.Tech in Computer Science
CGPA: **9.16/10** (Till 5th Semester) • Department **Rank 3** • Expected 2021

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

INTERESTS

Data Structures & Algorithms • Android Application & Web Development • Machine Learning • Game Development

TECHNICAL SKILLS

PROGRAMMING LANGUAGES
C • C++ • Python • Java • JavaScript • Ruby • Lua

ANDROID APP DEVELOPMENT
Android Studio • React Native

WEB DEVELOPMENT
Django • Ruby on Rails • Flask
JavaScript • HTML • CSS • Bootstrap
PostgreSQL • SQLite • MongoDB

UTILITIES
Git • SSH • Raspberry Pi • Microsoft Azure • Heroku

PROJECTS

SOCIALCLOUD | Web Development, JavaScript Application
GitHub→ | Deployed on Heroku→

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)** .

NATURAL LANGUAGE PROCESSING | Machine Learning, NLTK, Scikit
B.TECH PROJECT | GitHub→

Programmed various Hindi and English **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.

IITJ HEALTHCARE | Software Engineering, Web Development
Demo Video→| GitHub→ | Deployed on Heroku→

An online health care assistance portal made using **Django (Python)** , combination of **SQLite / PostgreSQL** 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
GitHub→ | Deployed on Heroku→

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

PONG, FLAPPY BIRD | 2D Game Development
GitHub Pong→ | GitHub Flappy Bird→

Programmed remakes of respective games made using the language **Lua** and **LÖVE2D** framework. Pong is a multiplayer game and Flappy Bird is a single player game.

DISASTER SAFETY APP | Android Application, Web Development
GitHub Web App→ | GitHub Android App→

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
GitHub→

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 like **Caesar** and **Vigenère** as a part of Cryptography I course under Professor Dan Boneh.

DATA STRUCTURES & ALGORITHMS | Python, C++, C
3 Forks | Open-Sourced GitHub→

Programmed a total of 45 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
GitHub→

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

ACHIEVEMENTS

SCHOLASTIC

- **Rank 2471, JEE Main** , among top 0.2% of 1.2 million participants
- **Rank 2848, JEE Advanced** , among top 1% of 0.3 million participants
- **Data Structures & 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
- **SAT Subject PCM Perfect Scorer** - 2400 / 2400
- SAT Score - 2100 / 2400
- 3 - Time **School Scholastic Excellence Awardee**
- **School Topper** , Class 12 CBSE Exams

EXTRACURRICULAR

- Former **State Level Football Player** , New Delhi
- **Football Inter - Zonals Winner** , New Delhi
- 4 - Time School Level **Athletics Record Breaker**
- Participated in Various Olympiads, Trekking Camps

POSITIONS OF RESPONSIBILITY
- **Vice Sports Captain** | Class 11
- **Sports Captain** | Class 12