

Shashwat Kathuria

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EDUCATION

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

INDIAN INSTITUTE OF TECHNOLOGY, JODHPUR | B.TECH. IN COMPUTER SCIENCE & ENGINEERING
2017-2021 • CGPA: 8.89/10 • Department Rank 4

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++ • C# • Python • Java • JavaScript • Scala • Ruby • Lua

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

Mobile App Development: Android Studio • React Native

Big Data: Apache Spark • Hadoop • Synapse • HDInsight • Azure Data Factory

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

EXPERIENCE

MICROSOFT | SOFTWARE DEVELOPMENT ENGINEER 2

Sep 2023 - Present | Hyderabad | Score Data Lake

- Developed a system for **big data from scratch** aimed at computing results on **massive amounts of audit and sites data**, along with supporting **parallelism and efficiency in pipelines and resources**.
- Implemented using **Apache Spark, Scala, SQL, Synapse, HDInsight** and **Azure Data Factory**.




MICROSOFT | SOFTWARE DEVELOPMENT ENGINEER

June 2021 - Sep 2023 | Hyderabad | Microsoft SharePoint

- Worked on **UI of data access governance section** of **SharePoint admin center** website to present the data related to **sharing links of files** and their **labeling data**.
- Implemented using **ReactJS** and **Webpack**.


GOOGLE SUMMER OF CODE | SOFTWARE ENGINEER INTERN, WIKIMEDIA FOUNDATION

May 2020 - September 2020 | 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 DEVELOPMENT ENGINEER INTERN

May 2020 - 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 and deployed on **Azure**.

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 **Azure**.

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 **Azure**.

HANDWRITTEN MATHEMATICAL FORMULAE - PAGE OBJECT DETECTION | [GITHUB](#)

Machine Learning, GPU

- Developed an **RCNN** model to detect **handwritten mathematical formulae** in documents and **generated the handwritten documents dataset** with annotations using **synthetic dataset generation technique**.
- Implemented using **Nvidia GPU**, **Python**, **TensorFlow**, **OpenCV**, **Keras**, **Pandas**, **Tkinter** and **Matplotlib**.

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**.

CHAT APPLICATION | [GITHUB](#)

Progressive Web Application, Socket.IO, Web Development

- Developed a **progressive web application** allowing users to **chat one-to-one** and additionally **get reminders via push notifications** for tasks the user saves.
- Implemented using **NodeJS**, **ReactJS**, **MongoDB**, **ExpressJS**, **Webpack**, **Socket.IO** and **Bootstrap** (HTML / CSS / JavaScript).

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 **Azure**.

ACHIEVEMENTS

- **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)
- **School Topper**, Class 12 CBSE Exams
- Won **Football Inter-Zonals 2014-15**, New Delhi and **17 Awards in School Level Sports**

POSITIONS OF RESPONSIBILITY

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