

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 3

G. D. GOENKA PUBLIC SCHOOL, NEW DELHI | CBSE

Class 10, 2015 | CGPA: 9.6/10 • Class 12, 2017 | Percentage: 96%

TECHNICAL SKILLS

Programming Languages: C • C++ • C# • Python • Java • JavaScript • Scala • Ruby • Lua

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

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 • Microsoft Substrate

EXPERIENCE

MICROSOFT | SOFTWARE DEVELOPMENT ENGINEER 2 | LEVEL 61, LEVEL 62

September 2023 - Present | Noida | Microsoft SharePoint & Substrate

- Developed Score Data Lake, a **big data platform**, from scratch to **process massive amounts of audit and sites data and generate reports**, and added robust support for **parallelism and efficient pipeline resource utilization**.
- Expanded **data access governance reporting** for administrators from **2 to 10+** new report types, supporting multiple partner teams and **scaling the platform from 7,000 to 300,000+ tenants**.
- Designed, analyzed load and **implemented** the Content Events feature end to end from scratch to detect **malicious users** performing high volume downloads, deletions, and sharing activities in tenants, efficiently processing **large scale activity data with limited resources** while collaborating with multiple internal teams and external stakeholders.
- Implemented using **Apache Spark, Scala, SQL, Synapse, HDInsight, Azure Data Factory, Microsoft Substrate, Cosmos, ASP.NET Core, .NET and C#**.

MICROSOFT | SOFTWARE DEVELOPMENT ENGINEER 1 | LEVEL 59, LEVEL 60

June 2021 - September 2023 | Noida | Microsoft SharePoint

- Worked on **backend, UI and joblets** of data access governance section of **SharePoint admin center** website to compute and show reports related to **sharing links of files** and **site sensitivity labels**.
- Implemented using **C#, 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 Garage, Teams & SharePoint

- Worked at **Microsoft Garage** ↗ and developed a full mobile news application for iOS and Android **from scratch**, which was featured at **Microsoft Ignite** and **Hackathon (Android APK)** ↗.
- Implemented using **React Native** and integrated the application inside Microsoft Teams mobile application.

PROJECTS

INTELLIGENT TRAFFIC MANAGEMENT SYSTEM | GitHub , Deployed

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)** and deployed traffic penalty system 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, 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 annotated handwritten document datasets via synthetic data 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)**.

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 & POSITIONS OF RESPONSIBILITY

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