Shashwat Kathuria

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EDUCATION

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: 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 • Microsoft Substrate

EXPERIENCE

MICROSOFT | Software Development Engineer 2 | Level 61, Level 62
Sep 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** and **C#.**

MICROSOFT | Software Development Engineer 1 | Level 59, Level 60
June 2021 - Sep 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