

SANATAN SHRIVASTAVA

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EDUCATION

Indian Institute of Information Technology, Kota

Aug. 2018 - Jun. 2022

Bachelor of Technology, Computer Science and Engineering (Cumulative GPA: 8.48/10.00)

Jaipur, India

RELEVANT COURSEWORK

Data structures, Software Engineering, Database Management Systems, Operating Systems, Design and Analysis of Algorithms, Computer Networks.

RESEARCH EXPERIENCE

Indian Institute of Information Technology, Kota

Jan. 2021 - Dec. 2021

Project Title: *Early and Automated Diagnosis of Dysgraphia using Deep Neural Network.*

Sponsored by Department of Science and Technology (DST), New Delhi, Government of India.

Undergraduate Research Assistant; **Mentor:** Dr. Basant Agrawal (Asst. Professor)

- Proposed a model to extract features from sample images by using Optical Character Recognition (OCR) and openCV.
- Optimized the images by OCR using keras to reduce noise by converting images into grayscale.
- Leveraged the Adaptive Boosting (AdaBoost) algorithm for scoring the extracted attributes .
- Further deployed the project; developed a web portal by integrating Airtable API(s) solutions for collecting dataset; thereby reducing the cost of the total project by 30% compared to costs incurred by cloud storage.

Dept. of Science and Industrial Research, Ministry of Science and Technology

Aug. 2020 - Oct. 2021

Project Title: *Automated wheel chair for physically challenged using AIoT.*

Sponsored by Department of Science and Industrial Research (DSIR), Government of India.

Undergraduate Research Assistant; **Mentor:** Dr. Priyanka Mishra (Asst. Professor)

- Researched and proposed the modules for maintaining social distancing, recording body temperature, and oximeters to improve the utility of existing wheelchairs for quadriplegics.
- Evaluated the scope of using Artificial Intelligence of Things (AIoT) in the proposed modules for minimizing the requirement of manual support; Researched the viability of the EERG headset for the Robotic Arm movement using Brain-Computer Interface.

PUBLICATIONS

Mishra P., Shrivastava S. **Cloud AIoT based Smart Wheelchair using Module for Social Distancing, Temperature Monitoring, and Oximeter Module.** International Journal of Information Technology (IJIT) Vol. 7 No. 5 [DOAJ]

Shrivastava S., Sharma A. (2021) **Distributed Ledger Technology (DLT) and Byzantine Fault Tolerance in Blockchain** Accepted, under press in SoCTA 2021 (International Conference on Soft Computing: Theories and Applications) Vol. ahead-of-print No. ahead-of-print. [SCOPUS]

Agrawal B., Jain S., Shrivastava S. et al. (2021) **A Literature Survey on Detection of Dysgraphia through Machine Learning and Deep Neural Network.** Submitted, under review in the Australian Journal of Learning Difficulties [SCOPUS]

Mishra P., Shrivastava S. (2021) **Automated Wheelchair for Physically Challenged with AIoT modules** Submitted, under review in EAIH 2022 (Edge-AI in Healthcare: Trends and future perspective) Vol. ahead-of-print No. ahead-of-print.

INTERNSHIP EXPERIENCE

Samsung Data Systems (SDS)

Jan. 2022 - June. 2022

Software Developer Intern;

- Analyzing product quality through reviews, continuous testing, feedback analysis, and working on software integration.

On The Go Car Wash (OTG), Jaipur

Nov. 2020 - Jan. 2021

Web Developer/Full Stack Intern; Supervisor: Ms. Priyanka Singhal

- Developed a monitoring dashboard to assign/unassign a worker to an order, cancel customer-registrations, and billing feature.
- Improved website's performance by 40% through caching, asset optimization, and HTTP/2 resulting in 70% revenue growth.

Malaviya National Institute of Technology, Jaipur

Nov. 2018 - Feb. 2019

Technical Team; Supervisor: Mr. Ayush Rawal

- Deployed an interactive website of annual fest for event registration. Enhanced user experience; resulting in 70% increase in the revenue; Reduced costs by 300 % compared to the previous year's fest.
- Improved web performance and reduced the Page Load Time by 25% by leveraging browser-caching, asset optimization.

PROJECTS

- Python chat application using MQTT Broker** | *Minor Project 3* | *Python, MQTT* **April. 2021 - May 2021**
- Used tkinter to develop a Graphical User Interface and paho library to set up the MQTT client for chat feature.
 - Integrated Hive MQ cloud for storing the text messages while sending/receiving.
- Rhyme** | *Data Structures Project* | *Java Collections Framework* **Apr. 2020 - May. 2020**
- Developed a Java program to record expenditures, calculate savings and handle user transactions.
 - Implemented Heap data structure, reducing complexity from $O(k*n)$ to $O(k*(\log(n)))$.
- Enterprise Resource Portal** | *Academic Team Project* | *HTML5, CSS3, Javascript, SQL* **Nov. 2019 - Feb 2020**
- Implemented features including automatic report generation; tuition-fees payment; receipt generation etc.

TECHNICAL SKILLS

Languages: Core Java, C, C++, Javascript, Python, HTML5
Developer Tools: VS Code, Google Cloud Platform, Github AWS, Canva

CERTIFICATIONS

Algorithmic Toolbox — University of California, San Diego
Software Engineering Virtual Experience — JP Morgan Chase and Forage (Previously Insidesherpa)
Texted Based Bank in Java — Coursera Project Network

AWARDS AND RECOGNITION

- Accepted to the **Udacity Bertelsmann Technology Scholarship program 2020** for **Cloud Computing** track.
- Team reached finals out of 25+ teams for **Smart India Hackathon 2020** (campus edition).
- Secured **2nd** rank in 'Hack24', a 24 hour long team hackathon at **Sphinx, MNIT Jaipur**, 2019.
- Secured **2nd** rank in the inter-college badminton tournament in **IIIT Kota sports tournament** 2019.

EXTRACURRICULAR / LEADERSHIP

- Training and Placement Committee, IIIT Kota** **April. 2021 - Present**
Student Placement Coordinator *Indian Institute of Information Technology, Kota*
- Managed placement-related engagements between the college and companies to ensure internship and placement opportunities for all the students and hosted placement preparation workshops for the students.
- Jal Shakti team by the Ministry of Jal Shakti, Govt. Of India** **Oct. 2019 - Oct. 2021**
Team member / Advisor *Indian Institute of Information Technology, Kota*
- Conducted knowledge drives at government high schools in Jaipur to raise awareness about water conservation; helped the team plan various competitions to teach students about the need for rainwater harvesting.
- Sports Council - Badminton Team** **Aug. 2020 - Aug. 2021**
Institute Badminton team captain *Indian Institute of Information Technology, Kota*
- Led the team to tours at BOSM'19 (BITS Pilani Open Sports Meet) at Birla Institute of Technology and Science, Pilani, and Inter-IIIT meet at the Indian Institute of Information Technology, Allahabad (U.P).
- Google Developer Students Club** **July 2020 - Aug. 2021**
GDSC Student Lead /Teaching Assistant *Indian Institute of Information Technology, Kota*
- Taught Java, Cloud Computing etc, to students; succesfully hosted the '30 Days of Google Cloud' by Google.
- IIIT Kernel — Technical Forum, IIIT Kota** **Oct. 2020 - July 2021**
Student Lead / Advisor *Indian Institute of Information Technology, Kota*
- Arranged sessions with leaders and mentors from Industry and Academia for students including students from underrepresented communities across Jaipur.
- Odyssey - Literary Society** **Aug. 2019 - Aug. 2020**
General Secretary *Indian Institute of Information Technology, Kota*
- Hosted workshops to teach communication and debating skills to Juniors at my college. Designed and published the official college magazine Quills 'n' Stills.