Vendra Sekar

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PROFILE

An aspiring problem solver and confident initiator, a zealous Information Technology engineering student with a keen eye for problem-solving, relishing the intricacies of data science and software development. Currently working on honing my leadership qualities and communication skills, to complement my technical expertise.

ACADEMIC QUALIFICATION

Don Bosco Institute of Technology, Mumbai, India **June 2024**
Bachelors of Engineering in Information Technology
- Average: 9.56
- Chairperson, CSI (Computer Society of India) DBIT, Technical Student Chapter of the Institute
- Vice Chairperson, LitSoc (Literary Society) DBIT
- Editor of the college newsletter
- Event Coordinator at Colossuem, Technical Fest of DBIT
- Event Head at Hysteria, Cultural Fest of DBIT
- Lead compère for convocation of batches 2020, 2022 and crEAST Akanksha 2022

St. Andrews College of Arts, Science & Commerce, Mumbai, India **February 2020**
HSC
- Percentage: 72.62
- Participated in intra college science exhibition

St. Joseph Convent High School, Mumbai, India **March 2018**
SSC
- Percentage: 88.00
- Prefect (Head Monitor) for the academic year 2017-2018

ACADEMIC PROJECTS

Title: DeceptiScan: Detecting Deepfake Images
Duration: Jul'23 – May'24
Team Size: 3
Description: Comparative analysis between different deepfake detection models, and to optimize their performance. The project investigates models in emerging AI-generated deepfake technology. It aims to understand models' mechanisms, identify strengths/weaknesses, and create ensemble models balancing efficiency and accuracy. Performance metrics (accuracy, precision, recall, F1 score) for models (Xception, DenseNet, EfficientNet B2, Inception ResNet V2, ResNext, Swin Transformer V2, ConvNext, VGG 16) were analysed.

Title: Automated Short Answer Grading System
Duration: Feb'23 – May'23
Team Size: 3
Description: The project aims to develop an Automated Short Answer Grading (ASAG) system that utilizes machine learning and natural language processing (NLP) techniques to efficiently evaluate candidates' short textual responses. By automating the grading process, the system aims to reduce manual effort and provide consistent and accurate evaluations. The ASAG system will revolutionize the assessment process, offering timely feedback and enabling instructors to focus on providing valuable guidance to candidates.

Title: CSI Management Mobile & Web App
Duration: Jul'22 – Oct'22
Team Size: 3
Description: A web and mobile interface for the members of CSI, a technical student chapter to use for managing the event procedures and requesting approval from higher management in a single platform. Revamped event management for CSI by enabling event proposal approvals, task assignments, and attendance tracking via an

efficient app. Implemented a streamlined process for members to request attendance verification. Enhanced accessibility with comprehensive activity reports for all CSI events.

Title: Varanasi Smart City Interactive Dashboard
Duration: Dec'21 - Jan'22
Team size: 4
Description: This project was aimed at creating an interactive dashboard for the Urban Geospatial Data Stories Challenge 2022. Developed using R Shiny, the project aims to simplify waste management in the Varanasi Smart City by enabling residents to easily locate dustbins and their precise locations. The user□friendly dashboard encouraged proper waste segregation, contributing significantly to environmental sustainability efforts.

Title: Biometrics Enabled Smart Attendance System
Duration: Jul'23 - Oct'23
Team size: 6
Description: The Biometrics Enabled Smart Attendance System utilizes IoT sensors (R305 fingerprint sensor, ESP8266 WiFi module) to transmit attendance data to the cloud. Student registration is done via a user-friendly web app (Node.js, MySQL) hosted on Digital Ocean. The system enables students to mark attendance on their mobiles using a Flutter app, integrating roll number verification and fingerprint scanning for accuracy and security.

TECHNICAL SKILLS

- **Languages:** Java, Python, C, C++, R Language
- **Web Technologies:** HTML5, CSS3, JS, Node.js
- **Databases:** MySQL, MongoDB
- **Additional Expertise:** Flutter, Machine Learning, NLP, Android Application Development
- **Graphic Software:** Adobe XD

INTERNSHIPS

AI Chatbot Development at MindStix Software Labs (Jan 2023 - May 2023):
- Developed an automated chatbot for interviews and answer assessment, leveraging NLP techniques and transformers.
- Utilized language models like BERT and Universal Sentence Encoder for advanced text processing, classification, and automatic response evaluation.
- Implemented various similarity approaches and machine learning algorithms to enhance the chatbot's understanding and matching capabilities, improving its response evaluation module.

Teaching Assistant at CrEAST, Don Bosco Institute of Technology (Dec 2022 - Feb 2023):
- Designed syllabus for 'Advance webBuildr' course, showcasing educational content development skills.
- Created informative booklets for effective learning and assisted in teaching web development to school students.
- Contributed significantly to STEM engagement in the crEAST initiative, emphasizing clear communication of complex technical concepts.

Research Assistant in Cancer and Radiology Reports (Dec 2022):
- As a Research Assistant, employed advanced data extraction and Natural Language Processing (NLP) techniques for the analysis of cancer and radiology reports.
- Utilized Python libraries to implement text operations, including stemming, lemmatization, tf-idf, n-gram, and bag of words, on the corpus.

College-level Internship - CSI Management App Development (July 2022 – Dec 2022):
- Demonstrated expertise in web and mobile application development, contributing to streamlined management of student chapters.
- Collaborated on implementing event administration features, ensuring seamless functionality, and enhancing the overall user experience.
- Created dynamic and responsive mobile and web application.

ACHIEVEMENTS

- Secured the 2nd prize for the project titled *"Automated Short Answer Grading System"* in the Innovex Poster Presentation Competition at Don Bosco Institute of Technology
- Participated in *Codeshastra, a 24-hour hackathon* organized by DJCSI - Computer Society of India, DJSCE on April 8th and 9th 2023.
- Volunteered at the 'Cyber Security Conference and Awards 2023' on 'Cyber Security' organized by the
- Computer Society of India, Mumbai Chapter, at the Indian Institute of Technology, Mumbai (May'23)
- Participated in *Urban Geospatial Data Stories Challenge 2022* held from December 2021 to February 2022 by Smart Cities Mission, Ministry of Housing and Urban Affairs.
- Annual Newsletter Editor of Don Bosco Institute of Technology
- Peer Mentor for Juniors and conducted sessions on communication and public speaking

CERTIFICATIONS

- UI/UX Design and Development Workshop (Issued March 2021)
- React JS Workshop (Issued March 2021)
- Urban Geospatial Data Stories Challenge 2022 (Issued April 2022)
- CodeShastra 9.0 Hackathon Participation Certificate (Issued March 2023)

CONFERENCE PAPERS

- Machine Learning-based Smart Locker (April 2024): Collaborated as part of a team on the development of a technical paper titled 'Machine Learning-based Smart Locker' under Prof. Janhvi Baikerikar's guidance. The paper has been accepted for presentation at a prestigious Scopus Indexed International Conference organized by IEEE Bombay Chapter, with the presentation scheduled for April 2024.