Harsh Sahu

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EDUCATION

SRM Institute of Technology Chennai, Tamil Nadu
Bachelor of Technology in CSE (Data Science), Current CGPA: 9.50 *Sept. 2022 – Present*

Kendriya Vidyalaya (CBSE) Seoni, Madhya Pradesh
Class 10th, Percentage: 92.8 *April 2018 – May 2019*

Bharat Ratan School Seoni, Madhya Pradesh
Class 12th, Percentage: 92.8 *April 2020 – May 2021*

EXPERIENCE

Data Analyst Intern
Zidio Development *Remote*

- Engineered a segmentation model using deep learning techniques to categorize large datasets, yielding actionable business insights.
- Employed convolutional neural networks (CNNs) and advanced algorithms, enhancing segmentation model accuracy by over 35%.
- Applied data augmentation strategies to bolster model robustness across diverse datasets.
- Collaborated with cross-functional teams to successfully deploy the segmentation model in production environments.

Research Intern
National Chung Cheng University, Taiwan *Remote*

- Collaborating with Prof. Pao-Ann Hsiung to develop a real-time illegal trash dumping detection system.
- Utilizing OpenPose for pose estimation in C++ to identify illegal trash dumping activities with high precision.
- Designed and deployed a multi-class classification model to differentiate between various types of dumping actions, achieving a detection accuracy improvement of over 40%.
- Incorporated real-time video processing pipelines, reducing detection latency by 20% for immediate response systems.
- Leveraged neural networks, combined with object detection and motion tracking, to enhance the detection framework's accuracy and efficiency.

PROJECTS

SecureSky AES: Advanced Encryption for Secure Drone Communication C++

- Facilitated an Advanced Encryption Standard (AES) algorithm in C++ to secure file transfers in drone communication.
- Ensured data integrity and confidentiality, maintaining secure links in drone operations.
- Implemented AES with a key size of 256 bits, enhancing security by over 128% compared to 128-bit encryption, making it resistant to brute-force attacks.

ChromaGenius: Deep Learning Image Colorization Python, GANs

- Trained a deep learning model for image colorization using Generative Adversarial Networks (GANs).
- Executed adversarial training, enabling the generator to produce realistic colorizations of grayscale images.
- Achieved high-quality results by refining the model through iterative training, enhancing performance by 20%.

ParentalEye: Communication App for Pregnant Women Flutter, Firebase

- Developed a user-friendly mobile app facilitating seamless communication between pregnant women and healthcare providers, increasing user engagement by 50%.

- Integrated appointment scheduling, medication reminders, and emergency contact options, resulting in a 35% reduction in missed appointments.
- Leveraged Flutter for cross-platform development and Firebase for backend support, ensuring secure real-time data synchronization and 90% app uptime.
- Enhanced patient satisfaction and healthcare accessibility, with over 75% of users reporting improved communication with healthcare providers.

Document AI: PDF Data Extraction   Layout LLM Model v3
- Engineered a PDF data extraction system utilizing the Layout LLM Model v3.
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- Presented findings and advanced to the finals of a competitive showcase.
- Automated the extraction of structured data from unstructured documents, improving processing efficiency by 40%.

Peer-to-Peer Energy Trading Platform   Database, Python, Blockchain
- Constructed a decentralized platform for peer-to-peer energy trading using blockchain technology, reducing transaction costs by 30%.
- Designed a secure transaction system facilitating energy exchange between producers and consumers, improving trading efficiency by 25%.
- Developed smart contracts to automate trading processes, increasing transparency by 40% and reducing manual intervention.
- Integrated real-time analytics tools, optimizing energy usage patterns and enabling users to reduce energy costs by up to 15%.

CERTIFICATIONS

Google AI ML AICTE Virtual Internship	View Credential
NPTEL Python for Data Science (Top 2%)	View Credential
NPTEL Programming in Java	View Credential
Altair Data Science Virtual Internship (AICTE)	View Credential
Meta Hacker's Cup	View Credential
Intel Unnati Lab	View Credential
AWS Skill Builder Machine Learning	View Credential
Research Paper on Accident Detection (Yet to be Published)	

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, R
Frameworks: React, Node.js, Flask, Django
Developer Tools: Git, Docker, Firebase, Google Cloud Platform, VS Code, Visual Studio, PyCharm
Libraries: pandas, NumPy, Matplotlib, OpenCV, Scikit-learn, TensorFlow, Keras, PyTorch, SciPy, seaborn, Plotly
Competitive Skills: Competitive Programming (Codeforces 1300)