SAIVAMSI BORRA

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SUMMARY:

I am a highly motivated and detail-oriented professional with expertise in programming, data analysis, and machine learning. I have a strong passion for developing user-centric applications, solving complex problems, and working with diverse data sources. I excel in collaborative environments and am dedicated to delivering innovative, efficient, and practical solutions.

WORK EXPERIENCE:

Assistant Engineer | Ajai Robotics | Dec 2024 – Present

Developed a real-time person-with-weapon detection system aimed at enhancing public safety by identifying individuals holding firearms. Designed for deployment in high-risk environments such as malls and schools to proactively prevent potential threats and save lives.

- Gained hands-on experience in Person Re-Identification using TransReID and OSNet (via Torchreid), with Deep SORT for person tracking.
- Conducted training and validation of a YOLO-based model for hand gesture recognition, developing an end-to-end pipeline including dataset collection, annotation, structuring, and model optimization. Focused on minimizing false positives through gesture-based filtering techniques.
- Conducted real-time performance analysis of robotic systems, identifying and mitigating latency and stability issues in practical deployment scenarios. Tested and validated person tracking models in diverse environments, specifically focusing on detecting and tracking individuals holding firearms.
- Implemented ArcFace model for reliable person re-identification, specifically focusing on accurately re-identifying individuals holding weapons across different scenes and viewpoints.
- Configured and utilized on-premise GPU infrastructure for model training and fine-tuning, eliminating reliance on cloud services and ensuring efficient local development and experimentation.

Data Analysis & AI Intern | Ajai Robotics | May 2024 – November 2024

- Gained hands-on experience in computer vision, image processing, and working with vision and voice models.
- Explored real-time operations of robots in practical environments.
- Tested and fine-tuned BART and FLAN-T5 large language models for a custom coffee brewing project, integrating them with Rasa for conversational AI capabilities.
- Explored and evaluated multiple object detection models beyond YOLO—such as RT-DETR, Swin Transformers, and Detectron—for firearm detection. Conducted comparative analysis to assess accuracy, speed, and robustness, identifying the most effective solution for real-world deployment.

Data Science Intern | Nala Robotics | Nov 2023 – April 2024

- Enhanced skills in Python, SQL, and machine learning through project involvement and practical exercises.
- I contribute to maintaining high standards by reviewing,verifying, and enhancing datasets.

INTERNSHIPS:

- Developed a solid understanding of key AI & ML concepts through a virtual internship with AICTE- EduSkills.
- Gained expertise in process mining through a virtual internship with AICTE-EduSkills.
- Developed cyber security skills through a virtual internship with AICTE-EduSkills.
- Explored Blue Prism Intelligent Automation capabilities through a virtual internship with AICTE.

TECHNICAL SKILLS:

- Programming Languages : C, Java, Python
- Web Technologies : HTML, CSS, JavaScript, Flutter
- Libraries & Tools : Pandas, NumPy, OpenCV, Matplotlib
- Databases : MySQL, MongoDB
- Frameworks : TensorFlow (Keras), Scikit-learn, Flask
- Version Control : Git
- Miscellaneous : Machine Learning, Data Visualization, PL/SQL, Bart

EDUCATIONAL QUALIFICATION:

Institution	Course	Year of Passing	CGPA
Usha Rama College of Engineering and Technology, Telaprolu	B.Tech (IT)	2024	7.5
Sri chaitanya Junior College, Eluru	Intermediate (MPC)	2020	7.94
Siddhartha vidyalaya, Hanuman junction	SSC	2018	9.3

PROJECT:

Localization of DFU using CNN

- Developed a Convolutional Neural Network (CNN) using Keras to recognize diabetic persons.
- The pre-processing and classification was done by TensorFlow library and plotting of pose's was done by matplot library.

Duration of the Project : 6 Months

Technologies Used : Python, OpenCV, Keras, CNN, NumPy, Pandas, Matplotlib.

Role : Leadership, Collaboration, Image Preprocessing, Model Design, Model Training, Model Evaluation, Problem Solving, Decision-Making.

SOFT SKILLS:

- Adaptability which continues personal growth
- Excellent interpersonal skills that help in building good network
- Fast Learner