Mrs. BHOOMIKA RAVAL

AI / ML Engineer and researcher,

PhD Research scholar,

Computer science & IT

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📞 9106776024

📍 *Ahemdabad & Banglore, India*

EDUCATION

Bachelor of engineering

Information technology

CGPA: 6.90

Government engineering college Modasa

📅 *2012 - 2016*

📍 *Gujarat, India*

Master of engineering

Information technology

CGPA: 8.18

Silver Oak College of
    Engineering & Technology

📅 *2016 - 2018*

📍 *Gujarat, India*

TECHNICAL SKILLS

- Object classification and detection
- Computer vision based applications
- Human behavior and activity analysis
- Literature Review
- Data analysis and Visualization
- Research and Review paper writing
- Model and technique implementation
- Tensor flow and Keras framework

STRENGTHS

- Enthusiastic and Energetic
- Positive Attitude
- Fast learner

CAREER OBJECTIVE

With almost 6 years of experience in the computer vision based research fields such as Human crowd activity and sentiment analysis, human and object detection, I'm looking for the good opportunity where I can gain my knowledge and extend my research work in the solution to real life challenges.

WORK EXPERIENCE

➤ Artificial Intelligence Engineer

Rayvector technology

📅 Oct 2023 - current   📍 Banglore

- As a AI engineer I'm serving as lead of project called Mechanical motion component analysis based on LAM research,USA.
- The project is about to monitoring wafer deposition process in semiconductors by providing AI based solutions.
- There are various processes handing that R & D, Planning, Model development, super computer (vecow) based inference, docarization of inference pipeline and report development.
- Develop a synthetic data and dataset structure to develop a model.
- Have implementated segmentation and detection algorithms such as YOLO and U-Net architecture (Pytorch) in order to segment the components such as wafer, showerhead, pedestal, lift-pin, and robotarm.

➤ Research Associate

Ganpat University

📅 2019 - 2023   📍 Mehsana,Gujarat

- *As Research scholar,* have trained 30+ UG and PG students to work with various AI based applications using machine learning and deep learning(Python)at their project and research phase.
- Delivered sessions on AI, Computational statistics, NLP, Machine learning and Python subjects at the UG level program of university.

PROJECTS

Crowd sentiment analysis – Ph.D. Research Project

📅 July 2019 – July 2024

- This research work is targeted to analyze the sentiments of crowd from real world images and also provides standard level literature in the area.
- The proposed work following in the category of computer vision based application, which takes in to account various machine learning and deep learning techniques.
- The intermediate work includes various processes such as face detection, facial expression recognition, object detection, face quality enhancement, and global feature calculation.
- The numerous machine learning techniques utilized such as MTCNN algorithm, ResNet50, VGG-16, SVM, Ensemble modeling, super resolution.
- The implementation of proposed experiments done using GPU based Tensor flow and Keras framework, and other python libraries such as Numpy, Opencv, SciKit and etc.
- The research project is awarded by the education department of Gujarat state and granted the fund as a part of the SHODH competition.

Real time abnormal human behavior detection from video

📅 April 2017 - December 2018

This project is dissertation part of masters.

- The project work targeted with the aim of developing an **autonomous system to detect abnormal behavior of human from crowded video.**
- The Classification of high impact activities like Kicking, Punching, Pushing, handshaking & other activities performed in human motion videos using Statistical learning.
- The proposed system uses frame based feature extraction approach, which tested and validated with the online standard datasets using various machine learning and deep learning algorithms (Python).
- The proposed system also tested on self-developed human behavior dataset.

RESEARCH PAPER PUBLICATIONS

- Participated/published/presented a paper entitled **"Contour based abnormal event detection using Hidden Markov Model"** at the International Conference on Advance in Engineering and Technology(AIET) held at Ahmadabad, India,2018.
- Published a paper entitled **" A Survey on Human activity analysis techniques"** at the International Journal on Future Revolution in Computer Science & Communication Engineering,2018.
- **Published** a Research paper entitled **"Deep Neural Networks are Really Undefeatable for Human Conflicting and Non-conflicting Eventdetection"** at **IEEE International conference on Signal and Imageprocessing(ICSIPA) held on Malaysia,2019**.
- Published a review paper entitled with **"A recent survey on perceived group sentiment analysis "** to the **SCI based,** *journal of Visual Communication and Image* **Representation,2023**.
- The research paper entitled with **"Improved group facial expression recognition using super-resolved local facial multi scale features"** accepted at **Scopus** indexed International Conference on Intelligent Systems and Embedded Design (ISED-2023),**IEEE**,going to held on Dehradun,2023.

AREA OF INTEREST

- Computer vision
- Artificial intelligence
- Machine learning and Deep learning
- Data structure
- Data science and analytics
- Programming for problem solving
- Statistics

PROGRAMMING LANGUAGE

- C & C++
- JAVA
- Python
- Frameworks such as TensorFlow, Keras on NVIDIA and CUDA
- GPU based learning

SUPPORTED LINK:

https://drive.google.com/drive/folders/1wJ8XI7LfRUuyd23HfmDaX1j5O-194LFW?usp=share_link

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