K LOKESH

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SUMMARY

I am a deep learning enthusiast with a solid foundation in image processing, computer vision, and deep learning techniques. I pursued an Integrated Master of Science in Computer Science, during which I co-authored scholarly articles on advanced deep-learning methodologies for sentiment analysis and medical image analysis. My goal is to contribute to advancements in deep learning.

EDUCATION

Central University of Rajasthan, Ajmer *July 2019 - May 2024*
Integrated Master of Science in Computer Science CGPA: 7.46
Thesis Supervisor: Dr. Gaurav Meena
Thesis Title: Identifying Emotions Using Various Approaches

Sri Surya Junior College, Nagari (BIEAP) *July 2017 - Mar 2019*
Higher Secondary Education with Majors in PCM CGPA: 9.69

Vasishta Vidyalaya, Nagari (BSEAP) *Aug 2012 - Mar 2017*
Secondary Education CGPA: 8.8

PUBLICATIONS

1. Meena, G., Mohbey, K. K., & **Lokesh, K.** (2024). FSTL-SA: Few-shot Transfer Learning for Sentiment Analysis from Facial Expressions. *Data & Knowledge Engineering.* **(Communicated)**
2. Mohbey, K. K., Meena, G., Kumar, S., & **Lokesh, K.** (2023). A CNN-LSTM-based hybrid deep learning approach for sentiment analysis on Monkeypox tweets. *New Generation Computing, 42(1), 89-107.* [Link]
3. Meena, G., Mohbey, K. K., Acharya, M., & **Lokesh, K.** (2023). Original Research Article An improved convolutional neural network-based model for detecting brain tumors from augmented MRI images. *Journal of Autonomous Intelligence, 6(1).* [Link]
4. Meena, G., Mohbey, K. K., Kumar, S., & **Lokesh, K.** (2023). A hybrid deep learning approach for detecting sentiment polarities and knowledge graph representation on monkeypox tweets. *Decision Analytics Journal, 7, 100243.* [Link]

PROJECTS

Visual Sentiment Analysis Using Ensemble Learning *Jan 2024 - May 2024*

In this project, visual sentiment analysis was addressed on AffectNet using homogeneous ensemble learning with weighted voting:

- Utilised seven models, including a proposed CNN and six transfer learning models
- Employed weighted voting to leverage diverse model strengths

This method outperformed numerous existing approaches in the field of visual sentiment analysis.

Visual Sentiment Analysis Using Few-shot Learning *July 2023 - Nov 2023*

In this project, the limited data problem in visual sentiment analysis was addressed by employing a combination of advanced methodologies. The approaches used include:

- N-way-k-shot few-shot learning to handle the limited data scenario
- Semi-supervised learning to augment the data using pseudo-labeled data

The results have been submitted to *Data & Knowledge Engineering* of ScienceDirect.

Brain Tumor Detection from Augmented MRI Images *Feb 2022 - June 2022*

In this project, brain tumors were detected from MRI images using a fine-tuned CNN model trained on the Br35H benchmark dataset. The model was trained using:

- k-fold-cross-validation to demonstrate model generalisation
- Grad-CAM to visualise and interpret model prediction

The results were published in the *Journal of Autonomous Intelligence* by Frontier Scientific Publishing.

TECHNICAL SKILLS

Programming Languages: C, C++, Python
Image Processing & Analysis: NumPy, Pandas, Matplotlib, Grad-CAM
Tools and Libraries: TensorFlow, Keras, PyTorch, OpenCV, Seaborn
Web Development: HTML, CSS, JavaScript

ADDITIONAL COURSEWORK

1. The Joy of Computing using Python, NPTEL (Top 5%) [Certificate] *Oct 2022*
2. Artificial Intelligence: Search Methods for Problem Solving, NPTEL [Certificate] *Oct 2022*
3. Neural Networks and Deep Learning, Coursera [Certificate] *Feb 2022*
4. Foundation of Data Science, PadhAI (IIT Madras) [Certificate] *Oct 2021*

ACHIEVEMENTS

1. Best master's thesis titled '**Identifying Emotions Using Various Approaches**' *May 2024*
2. **Adapting to Climate Change by Improving Extreme Weather Forecasts** *Feb 2023*
   Datathon at Central University of Rajasthan, Runner Up

REFERENCES

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