**NARASARAOPETA ENGINEERING COLLEGE**

**(AUTONOMOUS)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**2023-2024**

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| **BATCH NUMBER** | BG2 |
| **TEAM MEMBERS** | S. Harshini (20471A05C0)<br>G. Divya (20471A0581)<br>T. Usha Gayathri Raimaji (20471A05C4) |
| **GUIDE** | M. Venkata Rao |
| **TITLE** | Facial Emotion Detection |
| **DOMAIN/TECHNOLOGY** | DEEP LEARNING |
| **BASE PAPER LINK** | https://doi.org/10.1007/s11042-022-13558-9 |
| **DATASET LINK** | https://www.kaggle.com/datasets/msambare/fer2013 |
| **SOFTWARE REQUIREMENTS** | **Browser:** Any latest browser likeChrome<br>**Operating System:** Windows 10 Server.<br>**Language:** Python |
| **HARDWARE REQUIREMENTS** | **Processor:** Intel® Dual Core 2.0GHz minimum<br>**Hard Disk:** 1TB minimum<br>**RAM:** 8GB or more<br>**Cache Memory:**4MB |

| **ABSTRACT** | These Human facial expressions convey a lot of information visually rather than articulately. Facial Emotion Detection plays a crucial role in the area of human-machine interaction, Automatic facial expression recognition system has many applications including, but not limited to, human behavior understanding, detection of mental disorders, and synthetic human expressions. Detection of facial emotions by computer with high recognition rate is still a challenging task. Facial Emotion Detection usually performed in four-stages consisting of pre-processing, face detection, feature extraction, and expression classification. In this project we applied various deep learning methods (convolutional neural networks) to identify the key seven human emotions: anger, disgust, fear, happiness, sadness, surprise and neutral. |
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