**CURA AI**

**Description**

CURA AI is an advanced tool designed to analyze MRI and CT scans of brain tumors. It assigns detailed annotations to each scan, helping medical professionals by providing clearer and more actionable insights from medical imaging. This tool is part of a broader initiative aimed at improving the efficiency and accuracy of medical imaging analysis. This version, compared to the previous now takes into consideration 3D planes (axial, coronal, sagittal), and provides bounding boxes with confidence scores.

**Installation Instructions**

**1 Clone the Repository:**  
  
https://github.com/myselfadityaranjan/cura-ai-cba.git

2 Navigate to the project directory

5 **Create and Activate a Virtual Environment:**  
  
python3 -m venv .venv

7 source venv/bin/activate

8 **Install Dependencies:**  
  
pip3 install -r requirements.txt

**11 Download Additional Resources:** If there are any additional resources or datasets needed, download them as instructed in the project documentation.

**Usage Instructions**

**1 Run the “train\_model.py” script to download the ResNet model in your directory**

**2 Run the Application:**

◦ Start the application by running:  
  
python app.py

**3 Open the Web Interface:**

◦ Open a web browser and navigate to the local HTML page provided in the project.

**4 Input Files:**

◦ Use the web interface to upload MRI or CT scan files. The tool will analyze the scans and provide annotations based on the input.

**License**

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**Contact**

For any questions or assistance, please reach out to:

**• Aditya Ranjan**: myselfadityaranjan@gmail.com

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**• TCIA - The Cancer Imaging Archive**: For providing the datasets used in this project:

◦ Schmainda KM, Prah M (2018). Data from Brain-Tumor-Progression. The Cancer Imaging Archive. DOI: 10.7937/K9/TCIA.2018.15quzvnb

◦ Barboriak, D. (2015). Data From RIDER NEURO MRI. The Cancer Imaging Archive. DOI: 10.7937/K9/TCIA.2015.VOSN3HN1

• Kaggle: https://www.kaggle.com/datasets/davidbroberts/brain-tumor-object-detection-datasets/data