

MID DEFENSE FINAL YEAR PROJECT

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TABLE OF CONTENT

- Introduction
- Problem Statement
- Software Requirement Specification
- Software Design Specification
- Gantt Chart
- Literature Review



EARLY BRAIN TUMOR DETECTION WEB-BASED APPLICATION

Introduction

The project focuses on using AI and advanced imaging to detect brain tumors from MRI or CT scans.

The goal is to enhance early detection, aid in treatment planning, and improve patient outcomes through accurate and efficient tumor detection



PROBLEM STATEMENT

Early Brain Tumor Detection Through Web-Based Application

- Develop a web-based application for early detection of brain tumors.
- Create an algorithm that analyzes medical imaging data (such as MRI or CT scans) to identify potential signs of brain tumors.

SOFTWARE REQUIREMENT SPECIFICATION

1. Purpose of the Document
2. Intended Audience
3. Project Scope
4. Functional Requirements
5. Non-Functional

PURPOSE OF THE DOCUMENT

The purpose of this document for the Final Year Project (FYP) is to provide a Software Requirements Specification (SRS) for a web-based Early Brain Tumor detection.

The SRS document outlines the system's scope and defines its boundaries, ensuring that all users/moderators have a clear understanding of the project's objectives.

INTENDED AUDIENCE

- Patients and caregivers
- Medical professionals
- Researchers in healthcare

PROJECT SCOPE

- Web-based tumor detection
- Imaging analysis
- Early diagnosis

FUNCTIONAL REQUIREMENTS

- User Registration
- Login
- Upload Image
- Detect Brain Tumor

NON-FUNCTIONAL

- User-friendly and easy to navigate.
- The system shall be designed to protect user data and prevent unauthorized access.
- The system shall also have a response time of less than 5 seconds for all user requests.

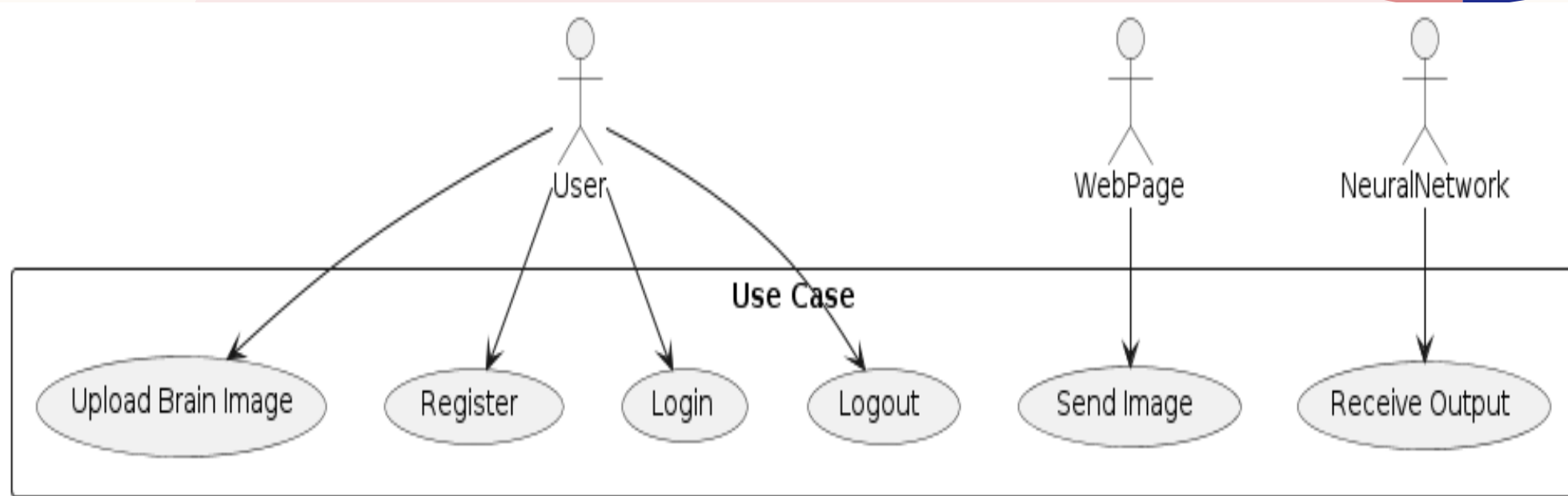
SOFTWARE DESIGN SPECIFICATION

1. Introduction
2. Use Case Diagram
3. Sequence Diagram
4. Activity Diagram

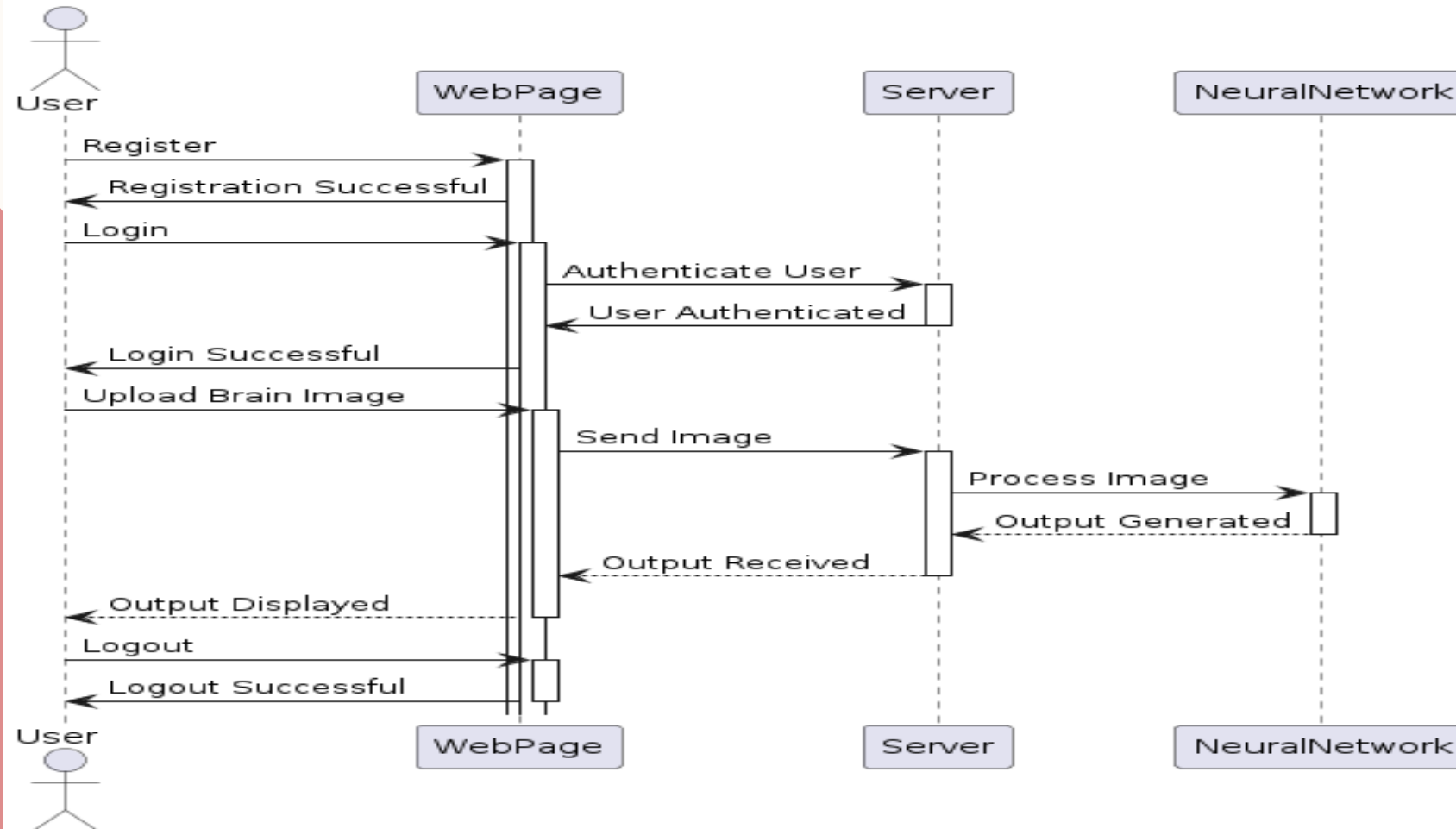
PURPOSE OF THE SDS

The purpose of this document is to describe the final year project "Early Brain Tumor Detection Web-Based Application" in detail and a high-level design framework.

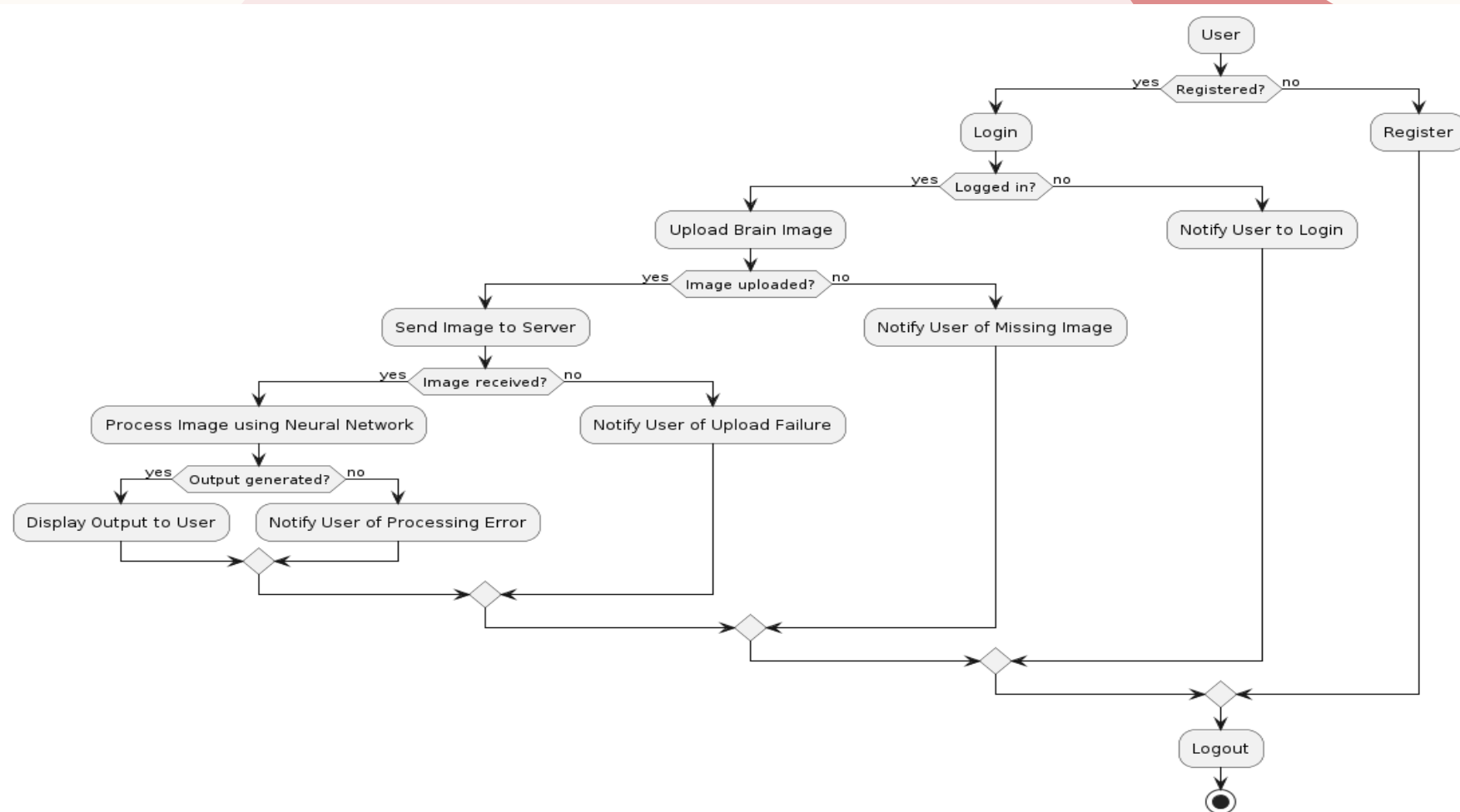
USE CASE DIAGRAM



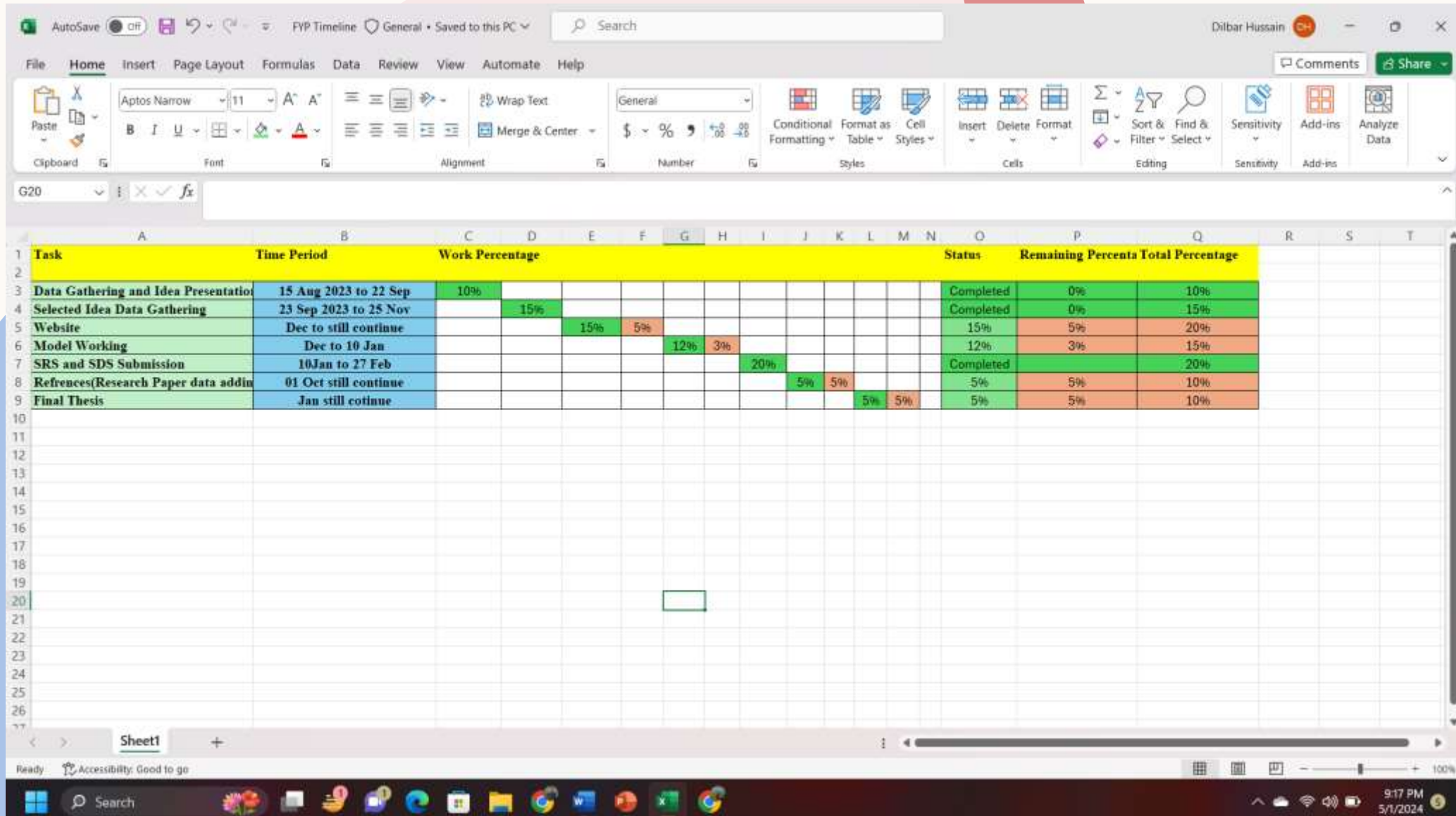
SEQUENCE DIAGRAM



ACTIVITY DIAGRAM



GANTT CHART



Literature	Research Paper Name	Findings/Comments/Limitation
Javeria Amin, Muhammad Sharif (Nov 2017)	A distinctive approach in brain tumor detection using MRI	<ul style="list-style-type: none"> Only work on MRI(Magnetic resonance imaging) images. The suggested technique comprises of three major steps that are preprocessing, extraction of features and analysis of detection.
Fairuz Shadmani Shishir, Mohsena Ashraf (2019)	Brain Tumor Detection Using Convolutional Neural Network	<ul style="list-style-type: none"> Segmenting the region of interest from an object is challenging; segmenting a tumor from an MRI Brain image is particularly ambitious. In our approach, we utilize two separate models: one for segmenting the brain region and another for detecting tumors within it.
Chirodip Lodh Choudhury July(2022)	Brain Tumor Detection and Classification Using Convolutional Neural Network and Deep Neural Network	<ul style="list-style-type: none"> The proposed method CNN used and implemented using MATLAB. We introduced a model comprising a 3-layered CNN architecture, which would subsequently connect to fully connected neural networks.

THANK YOU