North East University Bangladesh (NEUB)

Telihaor, Sheikhghat, Sylhet-3100

Department of Computer Science & Engineering (CSE)

Project Proposal Spring 2025

Course Code: CSE 460

Course Title: Deep Learning

Project Name:

Brain Tumor Detection Using Deep Learning

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Project Overview:

Brain tumors are life-threatening and require early, accurate diagnosis. Manual detection from MRI scans can be time-consuming and error-prone. This project proposes a deep learning-based approach to automatically detect brain tumors from MRI images, helping doctors make faster and more accurate decisions.

Problem Statement:

Traditional diagnosis methods are heavily dependent on expert radiologists and may vary across individuals. An automated solution can enhance diagnostic consistency and reduce the diagnosis time, ultimately saving lives.

Objectives:

- Develop a Convolutional Neural Network (CNN) to classify MRI images as tumor or non-tumor.
- Achieve high prediction accuracy and minimal false detection rates.
- Simple web-based interface for easy use.

Tools & Technologies:

- Language: Python
- Libraries: TensorFlow, Keras, NumPy, Pandas, Matplotlib
- Deployment: Flask