VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY

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LBS I2I:IDEA TO IMPLEMENTATION COMPETITION 2022-23

BRAIN TUMOR DETECTION USING CNN

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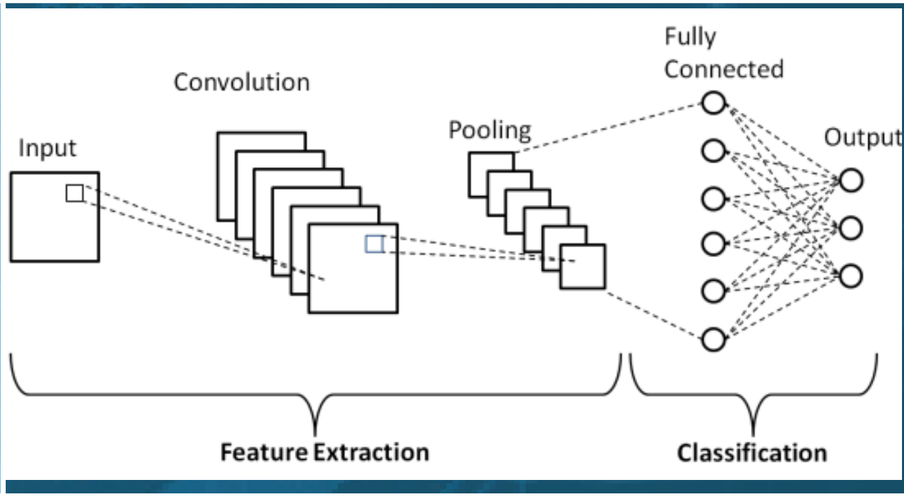
INTRODUCTION

We aim to develop a machine learning model using CNNs to detect brain tumours in MRI scans accurately. The tool will help medical professionals improve early detection and patient outcomes.

METHODOLOGY

- Using the dataset, the model changes the contouring, cropping, resizing, and other attributes of the photos.
- Data augmentation is used to create multiple photos with different visual attributes, and MLP networks are used to identify tumour locations in an image.

BLOCK DIAGRAM/MODULAR DIAGRAM



PROBLEM STATEMENT

Tumors in the brain area are difficult to detect due to heterogeneous size, shape, location, and boundaries, as well as human errors and inefficient detection.

RESULT AND ANALYSIS

- Brain Tumor Detection in MRI images with greater than 85% accuracy.
- Predicting Brain Tumor size and location and in the brain image.
- Predicting Tumor type and tumor treatment methods.

APPLICATIONS

- Early detection of brain tumours for prompt treatment
- Improving the accuracy and speed of diagnosis
- Tracking the progression of brain tumours