Capitol Graduate Research Summit

BRAIN TUMOR SEGMENTATION USING DEEP LEARNING

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Brain tumor segmentation is crucial in healthcare, and vital for accurately diagnosing and treating brain illnesses. With advancing medical imaging, accurate tumor identification and analysis are increasingly important, enabling professionals to see tumor details for better treatment planning.

The purpose of this research is to identify the detailed process for the segmentation of brain tumors, intending to address the urgent health challenges facing the diverse population in Kansas. Brain tumors pose a significant health challenge, so by using image-processing techniques and deep learning, we are working on improving the accuracy of the detection of brain tumors and developing tools to find them early.

We're using special magnetic resonance imaging (Brats MRI) as the dataset, and then we're using deep learning models to learn and identify brain tumors automatically. In other words, it would be like teaching a computer to be very good at spotting these types of threats.

Kansans will benefit from this research since it aims to make sure we have better tools for detecting and treating brain tumors. The faster and more precise we can find tumors, the sooner people can receive the appropriate treatment, and that is good for the health of everyone. To improve healthcare in Kansas, we aim to share what we learn.