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Editor-in-Chief

AICTE Mechanical Engineering e-Jour

Subject: Submission of Manuscript for Consideration in AICTE Mechanical Engineering e-Jour

Dear Editor-in-Chief,

I am pleased to submit our manuscript titled "Automated Nerve Segmentation Using Ultrasound Images with Deep Learning" for your consideration for publication in AICTE Mechanical Engineering e-Jour. This study presents a novel deep learning-based approach for nerve segmentation using ultrasound imaging, addressing the challenges in medical image analysis and improving diagnostic precision.

Our work leverages a convolutional neural network (CNN) architecture optimized for segmenting affected and non-affected nerve regions, employing data augmentation techniques and an 80-20 train-test split for robust model performance. The results demonstrate promising accuracy, enhancing early diagnosis and aiding medical practitioners in decision-making.

The key contributions of this research include:

- Development of a deep learning model tailored for nerve segmentation using ultrasound images.

- Comparison with traditional segmentation methods to highlight the improvements in accuracy and efficiency.

- Clinical integration considerations to ensure the feasibility of real-world applications.

To the best of our knowledge, this study offers significant contributions to the field of medical imaging and artificial intelligence. The findings align with the scope of AICTE Mechanical Engineering e-Jour and will be of interest to researchers and professionals in medical image processing, AI in healthcare, and deep learning-based diagnostics.

We confirm that this manuscript has not been published or submitted elsewhere for consideration. All authors have approved the final manuscript and have no conflicts of interest to declare.

We sincerely appreciate your time and consideration and look forward to your valuable feedback. Please feel free to contact me at srushtinvaidya@gmail.com for any further information.

Thank you for your consideration.

Sincerely,

Srushti N. Vaidya

Student

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