

Conferences > 2022 International Conference...

### An analysis on SVM and BPNN for CT Patient Table Detection using Distance-verses-angle Signature Feature

Publisher: IEEE [Cite This](#) PDF

Kanishka Sarkar; Tamroy Kanti Halder; Ardendu Mandal; Progyan Biswas; Simran Aryal; BamaJ Kundu; Preyasha Chakraborty [All Authors](#)

58  
Full  
Text Views

#### Alerts

[Manage Content Alerts](#)  
[Add to Citation Alerts](#)

Abstract
Document Sections
I. Introduction
II. Related Study
III. Methodology
IV. Results and Discussion
V. Conclusion and Future Scope
Authors
Figures
References
Keywords
Metrics
More Like This



**Abstract:**Biomedical imaging plays an essential role in analyzing and diagnosing diseases related to the brain, There is a considerable variation in brain medical datasets, such as... [View more](#)

#### ► Metadata

**Abstract:** Biomedical imaging plays an essential role in analyzing and diagnosing diseases related to the brain, There is a considerable variation in brain medical datasets, such as some CT scan datasets containing a patient table along with the brain object, whereas others only have the brain. In the first said category, the worthless undesirable tables are needed to be removed for further processing. On the other hand, no such removal techniques are required to be applied for the second case. This article has computed the classification performance of the Support Vector Machine(SVM) and Back Propagation algorithm(BPNN). The proposed method has been trained with 661 images and tested with 165 images. And the performance matrices show that both classifiers have the almost same level of accuracy, i.e., for SVM, average accuracy is 98.58% and for BPNN, it is 98.11%.

**Published in:** 2022 International Conference on Innovations in Science, Engineering and Technology (ICSET)

**Date of Conference:** 26-27 February 2022 **DOI:** 10.1109/ICSET54810,2022,9775851

**Date Added to IEEE Xplore:** 23 May 2022 **Publisher:** IEEE

**► ISBN Information:** **Conference Location:** Chittagong, Bangladesh

#### ☰ Contents

**I. Introduction**  
Biomedical imaging is a boon in the medical world. It has helped diagnose and analyze some of the most critical situations during a patient's medical emergency. Thus various medical imaging-based applications have been developed to assist diagnosis as well as to determine the treatment strategy [1]. The CT scan technique is one of the most effective techniques for this purpose, But there is a considerable variation in available images; some contain patient table, whereas some don't. With this, it is pretty challenging to maintain the robustness of any automated medical imaging application. The following Figure-1 shows the discussed two types of CT-scan dataset images, where Figure-1a is a CT-scan image collected from Medica Cancer Hospital, Siliguri, West Bengal, India and Figure-1b is an image from TCIA dataset [2].

Authors	▼
Figures	▼
References	▼
Keywords	▼
Metrics	▼

#### More Like This

Application of Improved Support Vector Machine Classification Algorithm in Korean Grammar Error Recognition Model  
2023 3rd International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON)  
Published: 2023

A Maximum Class Distance Robust Support Vector Machine Classification Algorithm  
2009 WRI Global Congress on Intelligent Systems  
Published: 2009

[Show More](#)

[CHANGE USERNAME/PASSWORD](#)

[PAYMENT OPTIONS](#)

[COMMUNICATIONS PREFERENCES](#)

[US & CANADA: +1 800 678 4333](#)



[VIEW PURCHASED DOCUMENTS](#)

[PROFESSION AND EDUCATION](#)

[WORLDWIDE: +1 732 981 0060](#)



[About IEEE Xplore](#) [Contact Us](#) [Help](#) [Accessibility](#) [Terms of Use](#) [Nondiscrimination Policy](#) [IEEE Ethics Reporting](#) [Sitemap](#) [IEEE Privacy Policy](#)

**IEEE Account**

- » [Change Username/Password](#)
- » [Update Address](#)

**Purchase Details**

- » [Payment Options](#)
- » [Order History](#)
- » [View Purchased Documents](#)

**Profile Information**

- » [Communications Preferences](#)
- » [Profession and Education](#)
- » [Technical Interests](#)

**Need Help?**

- » [US & Canada: +1 800 678 4333](#)
- » [Worldwide: +1 732 981 0060](#)
- » [Contact & Support](#)

[About IEEE Xplore](#) [Contact Us](#) [Help](#) [Accessibility](#) [Terms of Use](#) [Nondiscrimination Policy](#) [Sitemap](#) [Privacy & Opting Out of Cookies](#)

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.  
© Copyright 2024 IEEE - All rights reserved. Use of this web site signifies your agreement to the terms and conditions.