

<i>Research Paper</i>	<i>Research Paper Name</i>	<i>Author</i>
Paper 1 - EAI Endorsed Transaction on Pervasive Health and Technology	Brain Tumor Detection and Classification Using Deep Learning Models on MRI Scans	L. Chandra Sekhar Reddy1*, Muniyandy Elangovan2, M. Vamsikrishna3, Ch. Ravindra4
Paper 2 - Engineering Proceedings	Brain Tumor Detection and Classification Using Transfer Learning Models	Vinod Kumar Dhakshnamurthy 1 , Murali Govindan 1,* , Kannan Sreerangan 1,* , Manikanda Devarajan Nagarajan 2,* and Abhijith Thomas 1
Paper 3 - Scientific Reports	Brain tumor detection from images and comparison with transfer learning methods and 2 layer CNN	Mohammad Zafer Khaliki 1 & Muhammet Sinan Başarslan 2*
Paper 4 - Scientific Reports	Employing deep learning and transfer learning for accurate brain tumor detection	Sandeep Kumar Mathivanan 1, Sridevi Sonaimuthu 2, Sankar Murugesan 2, Hariharan Rajadurai 3, Basu Dev Shivahare 1 & Mohd Asif Shah 4,5,6*
		Wenna Chen 1*, Xinghua

Paper 5 - Frontiers	A robust approach for multi-type classification of brain tumor using deep feature fusion	Tan 2, Jincan Zhang 2, Ganqin Du 1, Qizhi Fu 1 and Hongwei Jiang 1*
Paper 6 - Algorithms	A Deep Analysis of Brain Tumor Detection from MR Images Using Deep Learning Networks	Md Ishtyaq Mahmud 1,* , Muntasir Mamun 2 and Ahmed Abdelgawad 1
Paper 7 - BMC Medical Informatics and Decision Making	MRI-based brain tumor detection using convolutional deep learning methods and chosen machine learning techniques	Soheila Saeedi1, Sorayya Rezayi1*, Hamidreza Keshavarz2 and Sharareh R. Niakan Kalhori1,3
Paper 8- IEEE Access	Brain Tumor Detection and Multi-Grade Segmentation Through Hybrid Caps-VGGNet Model	AYESHA JABBAR1 , SHAHID NASEEM 1 , TARIQ MAHMOOD 2,3 , TANZILA SABA 2 , (Senior Member, IEEE), FATEN S. ALAMRI 4 , AND AMJAD REHMAN 2 , (Senior Member, IEEE)



Dataset	Methodology/Algorithm Architecture	Performance & Accuracy		
		Accuracy	F1 -Score	Recall
Kaggle.com MRI Images (3264)	CNN	90.50%	93.28%	92.20%
	ResNet-50	98.43%	64.89%	54.98%
	VGG16	79.20%	73.78%	90.04%
	V3 of Inception	91.79%	79.32%	70.91%
Kaggle.com MRI Images (3264)	AlexNet	95.60%	94.68%	94.79%
	VGG16	97.66%	97.62%	97.56%
	ResNet-50	96.90%	96.51%	96.69%
	Hybrid VGG16 & ResNet 50	99.98%	99.98%	99.98%
Dataset of 2870 Human brain MRI Images	VGG19	96%	96%	96%
	EfficientNETB4	97%	96%	97%
	Inception V3	96%	96%	96%
	3 Layer CNN Model	91%	90%	91%
	VGG16	98%	97%	98%
Kaggle.com with 7023 Braim MRI Images	ResNet152	98.50%	98.5	98.25%
	DenseNet169	96.75%	96.75%	96%
	VGG19	96.00%	96%	98%
	MobileNetV3	96.00%	96%	95.75%
FigShare Public Dataset 3064 MRI Images	ResNet101	96.57%	96.20%	95.99%
	DenseNet121	98.53%	98.30%	98.52%
	EfficientNETB0	96.41%	95.98%	95.92%
	ResNet101 + DenseNet121	99.18%	99.08%	99.11%
	ResNet101 + EfficientNetB0	97.88%	97.65%	97.75%

	DenseNet121 + EfficientNetB0	98.69%	98.53%	98.70%
Kaggle Dataset with 3264 MRI Images	ResNet101	95.71%	95.78%	96.23%
	DenseNet121	95.25%	94.91%	95.81%
	EfficientNETB0	95.40%	95.54%	95.61%
	ResNet101 + DenseNet121	97.24%	97.28%	97.58%
	ResNet101 + EfficientNetB0	96.47%	96.52%	96.56%
Kaggle Dataset 3264 MRI Images	DenseNet121 + EfficientNetB0	97.09%	97.07%	97.22%
	CNN	93.30%	~92.13%	91.13%
	ResNet-50	81.10%	~81.24%	81.04%
	VGG16	71.60%	~70.04%	70.03%
Dataset(Unknown) 3264 MRI Images of Brain	Inception V3	80%	~79.81%	79.81%
	2D CNN	93.44%	97%	98%
BraTS20 Dataset + BraTS 2019 Dataset	Convolution auto-encoder	95.63%	97%	97%
	CNN-NADE	95.50%	95.50%	96.80%
	KNN-RF	95.20%	93.40%	94.40%
	GoogleNet-ResNet	93.20%	93.80%	95.30%
	PSO-SVM	91.70%	90.70%	87.30%
	HPU-Net	90.90%	90.90%	91.60%
	CNN-DWA	92.30%	95.30%	91.20%
	VGG-Net-ResNet	93%	93.70%	96.00%
	BrainMRNet	96%	-	92.40%
	ResNet50+Unet	99%	-	99.00%
	DenseNet201	98.80%	98.90%	98.10%
	Caps-VGGNet	99.60%	98.40%	98.50%



Result			Future Enhancement or Limitations
Precision	AUC	Loss(%)	
94.40%	78.03%	0.36	
82.20%	54.98%	0.59	
62.50%	98.60%	1.68	
90%	98.08%	3.68	
96.10%	~ 95.47%	NA	
97.40%	~ 95.47%	NA	
96.87%	~ 96.89%	NA	
100%	~ 99.98%	NA	
96%	99%	NA	
97%	99%	NA	
96%	99%	NA	
91%	98%	NA	
98%	99%	NA	
98.50%	~ 98.5%	0.1854	
97%	~ 96.5%	0.958	
97%	~ 97.5%	0.1245	
97%	~ 96.375%	0.1272	
96.43%	96.21%	NA	
98.10%	98.31%	NA	
96.05%	95.99%	NA	
99.07%	99.87%	NA	
97.58%	99.52%	NA	

98.37%	99.99%	NA	
95.50%	95.87%	NA	
94.39%	95.10%	NA	
95.48%	95.55%	NA	
97.06%	99.91%	NA	
96.59%	99.71%	NA	
97%	99.98%	NA	
~91.13%	98.43%	0.25	
~81.04%	94.20%	0.85	
~70.03%	89.60%	1.18	
~79.81%	89.14%	3.67	
97%	~96.92%	0.28	
96%	~98.05%	0.321	
~94.28%	95.40%	0.174	
~92.46%	91.40%	0.221	
~92.28%	93.80%	0.223	
~94.3%	92.70%	0.266	
~90.22%	93.90%	0.347	
~99.72%	95.10%	0.293	
~91.5%	94.60%	0.248	
-	-	0.148	
-	-	-	
~99.72%	-	-	
~98.37%	99%	0.103	

