ReviewForm1.7

JournalName:	**AsianJournalofResearchinComputerScience**
ManuscriptNumber:	**Ms_AJRCOS_117108**
TitleoftheManuscript:	**EEGInnovationsinNeurologicalDisorderDiagnostics:AQuinquennialReview**
Typeofthe Article	**ReviewArticle**

ReviewForm1.7

PART1:ReviewComments

	Reviewer'scomment	**Author's comment** *(if agreed with reviewer, correctthe manuscript and highlight that part in themanuscript.Itismandatorythatauthorsshouldwrite his/herfeedbackhere)*
CompulsoryREVISIONcomments **1. Isthemanuscriptimportantforscientificcommunity?** (Pleasewritefewsentencesonthismanuscript) **2. Isthetitleofthearticlesuitable?** (Ifnotpleasesuggestanalternativetitle) **3. Istheabstractofthearticlecomprehensive?** **4. Aresubsectionsandstructureofthemanuscriptappropriate?** **5. Doyouthinkthemanuscriptisscientificallycorrect?** **6. Are the references sufficient and recent? If you havesuggestion of additional references, please mention in thereviewform.** **(Apart from above mentioned 6 points, reviewers are free toprovideadditionalsuggestions/comments)**	1. This paper is certainly of importance and interest for the scientific community as it provides acomprehensive overview of the recent advancements in the use of electroencephalography (EEG)for diagnosing and evaluating various neurological conditions. It covers a wide range of topicsincluding epilepsy, sleep disorders, movement disorders, cognitive assessment, and brain injuryassessment, which are all significant areas of research and clinical practice in neuroscience. Theinclusion of recent improvements such as the integration of machine learning algorithms withhigh-density EEG systems for epilepsy diagnosis indicates the paper's relevance in discussingcutting-edge technologies and methodologies in EEG research. Additionally, the paper highlightsthe practical applications of EEG in monitoring response to treatment in sleep disorders andunderstanding cortical damage in conditions like Parkinson's disease and Huntington's disease.This aspect underscores the importance of EEG in both clinical diagnosis and research aimed atunravelingthepathogenesisofneurologicaldiseases.Furthermore,thepaperemphasizestherole of EEG in cognitive assessment and traumatic brain injury assessment, areas where EEG has shownpromise in providing valuable insights into early detection, disease progression, and outcomeprediction. Overall, the paper addresses several key areas of interest within the field of EEGresearch and clinical practice, making it relevant and potentially valuable for the scientificcommunity. Thetitlesounds clearandconcise. 2. However, if the author et al. are considering a rephrasing, perhaps something like"AdvancementsinEEGforDiagnosingNeurologicalDisorders:AFive-YearReview"couldbeanalternative.Itdependsonthetoneandstyletheauthor etal.areaimingfor. 3. The abstract provides a comprehensive overview of the paper's content, summarizing theprogress and applications of electroencephalography (EEG) in diagnosing and evaluating variousneurological conditions over the past five years. It covers key areas such as epilepsy, sleepdisorders, movement disorders, cognitive assessment, and brain injury assessment, highlightingtheutilityof EEGineachdomain. 4. Yes,theyflowthroughsmoothly. 5. Accuracyoffactsisgood. 6. 57ourof75citedsourcesintheReferencesarebetween2019-2023. Good!Quiterecentandcertainlyup-to-date.	
MinorREVISIONcomments **1.Islanguage/Englishqualityofthearticlesuitableforscholarlycommunications?**	Generally, the quality ofEnglishusedinthepaper isgood. However, certain paragraphs are far too long and dense in content. Breaking down a large amountof information into readable paragraphs helps improve comprehension and readability for thereader. It allows for easier digestion of complex concepts, helps organize ideas logically, andenhances the overall flow of the text. By presenting information in manageable chunks, it reducescognitive load and makes it easier for the reviewers, editors and readers to follow along and retainkeypoints.	

Optional/Generalcomments

Nofurthercomments.PleaserefertomyattachmentonReviewer'sGeneralCommentsontheParagraphs.

Paragraphs	GeneralComments
Title	Thetitlesounds clearandconcise. However, if the author et al. are considering a rephrasing, perhapssomething like "Advancements in EEG for Diagnosing NeurologicalDisorders:AFive-YearReview"couldbeanalternative.Itdependson thetoneandstyletheauthoretal.areaimingfor.
Abstract	MycommentsontheAbstract: 1. Facts:Thecontentseemsfactuallyaccurate,coveringvariousapplicationsofEEGindiagnosingneurologicalconditions. 2. Syntax:Thesyntaxissomewhatconvolutedandcouldbesimplifiedfor clarity and readability. There are run-on sentences and awkwardphrasingthatcouldbe improved. 3. Spelling: There are some minor spelling errors, such as"quinquennial"insteadof"quinquennially"andinconsistentcapitalizationof"TraumaticBrainInjury." Overallcomment:Theparagrapheffectivelydiscussestheapplications ofEEGbutcouldbenefitfromrestructuringforclarityandfixingminorspellingerrors.
Paragraph1	Mycommentsonthefirstparagraph: 1. AccuracyofFacts:TheinformationprovidedaboutEEGisaccurateand factual. However, the mention of "brian" instead of "brain" is aspellingerror. 2. Syntax:Theparagraphiswell-structured,withcleartopicsentencesandsupportingdetails.Thereareafew awkwardphrasingsthatcouldbe improved for smoother reading. For example, "Usually made ofconductive gel or paste, electrodes are small metal discs or sensorsthat are put to the scalp" could be rephrased for clarity andconciseness. 3. Spelling&Grammar:Thereisonespellingmistake:"brian"insteadof"brain". 4. Overall comment: The paragraph provides accurate informationaboutEEG,butitcouldbenefitfromminorimprovementsinsyntaxandspelling.
Figure1	Goodtoincludethisfigure.
Figure2	Itsimplifiestheexplanationofthecomplexprocess.

	Paragraph2	Mycommentsonthisparagraph: 1. Facts Accuracy of Facts: The paragraph accurately identifiesepilepsy, sleep disorders, movement disorders, brain injuries (strokeand TBI), and neurodevelopmental disorders (ADHD and ASD) asconditionswhereEEGisusedfordiagnosisorassessment.Itcorrectlyhighlights EEG's role in detecting abnormal electrical activity in thebrain during seizures, identifying sleep phases and disorders,diagnosing movement disorders, assessing brain function afterinjuries, and exploring underlying brain abnormalities inneurodevelopmentaldisorders. 2. Syntax: The paragraph is structured logically, with each sentenceproviding a brief explanation of EEG's role in diagnosing differentconditions. However, the syntax could be improved for smootherreadabilityandcoherence.Forexample,rephrasing"EventhoughEEGresults in these conditions are sometimes vague" to "While EEGresults in these conditions may sometimes be inconclusive" wouldenhanceclarityandflow. 3. Spelling&Grammar:Theparagraphdemonstratescorrectspelling andgrammar,contributingtoitsclarityandprofessionalism.No		
		spellingerrorsorgrammaticalissuesareapparentinthetext. 4.Overallcomment:Theparagrapheffectivelysummarizesthediverseapplications of EEG in diagnosing and monitoring various neurologicalconditions. With minor adjustments for syntax and structure, it wouldenhancereadabilityandcoherence.		
	Figure3	Thisisanexcellentillustrationthatmustbeincluded.		
	Paragraph3	Mycommentsonthisparagraph: 1. Accuracy of Facts: It accurately describes how EEG is used indiagnosing epilepsy, sleep disorders, movement disorders, andassessingbrainfunctionafterstrokeortraumaticbraininjury.Italsomentionsthepotentialroleof EEGinresearchingADHDandASD. 2. Syntax: The paragraph is well-structured and conveys theinformationinaclearmanner.However,thereareafewinstanceswhere repetition of phrases like "electroencephalography (EEG)"couldbereducedforbetterreadability. 3. Spelling&Grammar:Nospellingerrorsspotted.Good! 4. Overallcomment:Theparagrapheffectivelycommunicatesfactualinformationabout EEGanditsapplicationsinvariousmedical contexts.		

		Paragraph4	Mycommentonthisparagraph: 1. Accuracy of Facts: The paragraph accurately reflects the growingimportanceofEEGindiagnosingneurologicaldisorders,citingrecentstudies and advancements. However, it lacks specific citations forthesestudies,whichcouldenhanceitscredibility. 2. Syntax: The paragraph is well-structured and organized, with cleardelineation of different sections/topics. However, there are someminorissueswithgrammarandsyntax:“Thisstudysummarizes”couldbereplacedwith“Thisarticle” or“Thestudy”toavoidconfusionwith thestudymentionedearlier. “Section2discuss”should be “Section 2 discusses” to match subject-verb agreement.“Advancements in movement disorder diagnosis using EEG ispresented”shouldbe“AdvancementsinmovementdisorderdiagnosisusingEEGare presented”forsubject-verbagreement. 3. Spelling&Grammar:Therearenospellingerrorsintheparagraph. 4. Overall comment: The paragraph effectively communicates theimportance and scope of EEG in diagnosing neurological disorders,butitcouldbenefitfromspecificcitationsandminoradjustmentsto improveclarityandgrammar.		
		Paragraph5onEpilepsyDiagnosis *Advicetotheauthoretal.:*Breakingdowna large amount of information intoreadable paragraphs helps improvecomprehension and readability for thereader. It allows for easier digestion ofcomplex concepts, helps organize ideaslogically, and enhances the overall flow ofthe text. By presenting information inmanageable chunks, it reduces cognitiveloadandmakes iteasier for thereviewers, editors and readers to followalongand retainkeypoints	Mycommentsonthisparagraph: 1. Accuracy of Facts: It seems like the author et al. are providing acomprehensive overview of various frameworks and techniques forepileptic seizure detection from EEG signals. These methods rangefrom deep learning approaches to machine learning models, eachoffering promising results in terms of accuracy and efficiency. Theseadvancementsholdgreatpotentialforimprovingthequalityoflifeforpeople with epilepsy and streamlining the diagnostic process formedicalprofessionals. 2. Syntax:Foreaseofreading,thisparagraphisfartoolong.Theauthor et al. might want to consider breaking it down into morereadableor“digestible”paragraphs. 3. Spelling&Grammar:Nomisspellingspotted. 4. Overall comment: This long, dense paragraph can be detrimentalfor several reasons. Firstly, it can make the content difficult to readand understand, leading to reader fatigue and decreasedcomprehension.Secondly,itmaylackclarityandcoherence,makingitharderforthereadertofollowthelogicalflowofideas.Additionally, longparagraphscanmakeitchallengingforreviewersandeditorstoidentify key points and provide feedback effectively. It is strongly recommended that breaking up paragraphs into shorter, more digestible chunks can enhance readability and facilitate better communication of the research findings.		

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		Paragraph6onSleepDisordersDiagnosis *Advicetotheauthoretal.:*Breakingdowna large amount of information intoreadable paragraphs helps improvecomprehension and readability for thereader. It allows for easier digestion ofcomplex concepts, helps organize ideaslogically, and enhances the overall flow ofthe text. By presenting information inmanageable chunks, it reduces cognitiveloadandmakes iteasier for thereviewers,editorsandreaderstofollow alongandretainkeypoints.	1. Facts: 2. Syntax: This is another long ‘dense’ paragraph that is best brokendown for ease of reading. It is the responsibility of the author et al. todecideamongthemselveshowthisparagraphistobebrokendowninorder to ensure clarity and coherence of the content (avoiding‘murkiness’ of the content that the author’s et al. attempt to presentthe facts relevant to the paragraph) presented in the paragraph.Kindly break up paragraphs into shorter, more digestible chunks canenhance readability and facilitate better communication of theresearchfindings. 3. Spelling: 4. Overallcomment:		

		Paragraph7onMovementDisordersDiagnosis *Advicetotheauthoretal.:*Breakingdowna large amount of information intoreadable paragraphs helps improvecomprehension and readability for thereader. It allows for easier digestion ofcomplex concepts, helps organize ideaslogically, and enhances the overall flow ofthe text. By presenting information inmanageable chunks, it reduces cognitiveloadandmakes iteasier for thereviewers, editors and readers to followalongand retainkeypoints.	Mycommentsonthisparagraph: 1. AccuracyofFacts:Theparagraphdiscussesseveralstudiesandtheirfindings related to EEG-based diagnosis of movement disorders, suchas Parkinson's disease, Major Depressive Disorder, and Rapid EyeMovement Behavior Disorder. The studies mentioned appear to beaccuratelyrepresentedandreflectrecentadvancementsinthefield. 2. Syntax: The paragraph is well-organized, presenting each study andits findings in a clear and structured manner. However, somesentences are quite lengthy and could be broken down for betterreadability and clarity. For instance, the sentence beginning with "Forthepurposeofdiagnosingneurologicaldisorders…"couldbesplitintotwosentencestoenhancereadability. 3. Spelling & Grammar: Overall, the paragraph demonstrates goodspelling and grammar. However, there are a few instances whereminoradjustmentscouldimproveclarity.Forexample,inthesentence"Their work offers a promising new technique for the diagnosis ofdepression by demonstrating the ability of EEG-based characteristicsto distinguish MDD patients from healthy controls with consistency,"replacing "by demonstrating" with "by demonstrating how" couldclarify the role of EEG-based characteristics in distinguishing MDDpatientsfromhealthycontrols. 4. Coherence: The paragraph maintains coherence by logicallyorganizing information about various EEG-based diagnosticapproachesformovementdisorders.Eachstudyisintroducedwithitsmethodology and outcomes, providing a comprehensiveunderstandingofrecentdevelopmentsinthefield. 5. Overall comment: The paragraph effectively communicates thesignificance of EEG-based diagnostic approaches for movementdisorders and highlights recent research findings in the field. Withsomeminoradjustmentsforreadabilityandcoherence,itprovidesa comprehensiveoverviewofthetopic.		
		Paragraph8onCognitiveAssessment *Advicetotheauthoretal.:*Breakingdowna large amount of information intoreadable paragraphs helps improvecomprehension and readability for thereader. It allows for	Mycommentsonthisparagraph: 1. Accuracy of Facts: The paragraph presents a range of researchstudies and their findings in the field of EEG-based cognitiveevaluation.Thefactsseemaccurateandreflectcurrenttrendsanddevelopmentsinthefield uptotheknowledge cutoffdate. . Syntax:Theparagraphiswell-structured,withcleardelineationofdifferent studies and their methodologies and outcomes. However,somesentencesarequitelengthyandcouldbebrokendownfor better readability. For instance, the sentence starting with "With its non-invasive method…" could be split into two sentences to improve clarity and flow. . Spelling & Grammar: Overall, the spelling and grammar are correct. However, there are a few instances where minor adjustments could enhance readability. For example, in the sentence "Furthermore, exact temporal resolution is provided by event-related potentials (ERPs), which are obtained from EEG data and may be utilized to analyze cognitive processes with millisecond accuracy," "Furthermore" could be replaced with a simpler transition like "Moreover" for smoother flow. . Coherence: The paragraph maintains coherence by logically organizing information about		

		easier digestion ofcomplexconcepts,helpsorganizeideaslogically, and enhances the overall flow of the text. By presenting information in manageable chunks, it reduces cognitive load and makes it easier for the reviewers, editors and readers to follow along and retain key points.	various studies and their contributions to EEG-based cognitive evaluation. Each study is introduced with its methodology and findings, providing a clear understanding of the advancements in the field. . Overall comment: The paragraph effectively conveys the significance of EEG-based cognitive evaluation and highlights recent research findings in the field. With some minor adjustments for readability and coherence, it provides a comprehensive overview of . the topic.		

		Paragraph8onCognitiveAssessment *Advicetotheauthoretal.:*Breakingdowna large amount of information intoreadable paragraphs helps improvecomprehension and readability for thereader. It allows for easier digestion ofcomplex concepts, helps organize ideaslogically, and enhances the overall flow ofthe text. By presenting information inmanageable chunks, it reduces cognitiveloadandmakes iteasier for thereviewers, editors and readers to followalongand retainkeypoints.	Mycommentsonthisparagraph: 1. AccuracyofFacts:Theparagraphpresentsawealthofinformationabout various studies and their findings related to EEG-basedcognitive evaluation. The studies mentioned appear to be accuratelyrepresented and reflect current research trends in the field. Eachstudy is introduced with its methodology and outcomes, providing acomprehensiveoverview. 2. Syntax: The paragraph is well-structured, with clear delineation ofdifferent studies and their methodologies and outcomes. However,some sentences are lengthy and could be broken down for betterreadability.Forexample,thesentencestartingwith“Researcherscanfind certain neural signatures…” could be split into two sentences toimproveclarityandflow. 3. Spelling & Grammar: Overall, the paragraph demonstrates goodspelling and grammar. However, there are a few instances whereminor adjustments could enhance readability. For instance, in thesentence “Their work shows potential accuracy in detecting MCI byusinggammabandpoweranalysisandsensory-motorparadigmstodetermine cognitive deterioration,” replacing “potential accuracy”with“potentialforaccuracy”couldclarifytheintendedmeaning. 4. Coherence: The paragraph maintains coherence by logicallyorganizing information about various studies and their contributionsto EEG-based cognitive evaluation. Each study is introduced with itsmethodologyandfindings,providingaclearunderstandingofrecentadvancementsinthefield. 5. Overall comment: The paragraph effectively conveys thesignificanceofEEG-basedcognitiveevaluationandhighlightsrecentresearch findings in the field. With some minor adjustments forreadabilityandcoherence,itprovidesacomprehensiveoverviewof thetopic.		
		Paragraph9onBrainInjuryAssessment *Advicetotheauthoretal.:*Breakingdowna large amount of information intoreadableparagraphshelpsimprove comprehension andreadabilityforthereader. It allows for easier digestion of complex concepts, helps organize ideas	Mycommentsonthisparagraph: 1.AccuracyofFacts:Theparagraphdiscussesseveralstudiesandtheirfindings related to EEG’s role in brain injury assessment. The studiesmentioned appear to be accurately represented and reflect currentresearchtrendsinthe field.Eachstudyisintroducedwithits methodologyandoutcomes,providingadetailedunderstandingof recent advancements. 2. Syntax: The paragraph is well-structured, with clear delineation of different studies and their methodologies and outcomes. However, some sentences are quite lengthy and could be broken down for better readability. For example, the sentence starting with “Using supervised machine learning and normative modeling…” could be split into two sentences to improve clarity and flow. 3. Spelling & Grammar: Overall, the paragraph demonstrates good spelling and grammar. However, there are a few instances where minor adjustments could enhance readability. For example, in the sentence “Their method demonstrated its ability to enhance clinical decision-making by accurately identifying mTBI patients from controls with an accuracy of 79%,” replacing “its ability to enhance” with “the ability to enhance” could improve the sentence’s clarity. 4. Coherence: The paragraph maintains coherence by logically organizing information about various studies and their contributions to EEG-based brain injury assessment. Each study is introduced with its methodology and findings, providing a clear understanding of recent advancements in the field. 5. Overall comment: The paragraph effectively communicates the significance of EEG in brain injury assessment and highlights recent research findings in the field. With some minor		

		logically, and enhances the overall flow of the text. By presenting information in manageable chunks, it reduces cognitive load and makes it easier for the reviewers, editors and readers to follow along and retain key points.	adjustments for readability and coherence, it provides a comprehensive overview of the topic.		
		Paragraph10on Discussion	Mycommentsonthisparagraph: 1. AccuracyofFactsAccuracy:Theparagraphaccuratelydescribesthediversity of methodologies, techniques, and algorithms explored inautomatic seizure detection studies. It correctly identifies deeplearning models like CNNs and RNNs, as well as traditional machinelearning classifiers and ensemble models, as common approaches.Feature extraction methods such as DWT, SpPCA, and RP areappropriately mentioned, reflecting the variety of techniques used inseizure detection research. The mention of reported metrics likesensitivity, specificity, false detection rates, and AUC adds depth tothediscussion,highlightingtherobustnessoftheproposedmethods. 2. Syntax:Theparagraphiswell-structured,providingaclearoverviewof the comparative analysis. However, some sentences could besimplified for clarity. For example, the phrase “From deep learningmodels like Convolutional Neural Networks (CNNs) and RecurrentNeuralNetworks(RNNs)totraditionalmachinelearningclassifiersandensemble models, various approaches are explored” could berephrasedas“Variousapproaches,includingdeeplearningmodelslike CNNs and RNNs, as well as traditional machine learning classifiersandensemblemodels,areexplored.” 3. Spelling & Grammar: Overall, the paragraph demonstrates goodspelling and grammar. However, there are a few instances whereminor adjustments could enhance readability. For example, thephrase “Feature extraction methods range from basic signalprocessingtechniqueslikeDiscreteWaveletTransform(DWT)tomoreadvanced methods such as Spectral Principal Component Analysis(SpPCA) and Recurrence Plots (RP)” could benefit from parallelstructure, such as “from basic signal processing techniques like DWTtomoreadvancedmethodslikeSpPCAandRP.” 4. Coherence: The paragraph maintains coherence by logicallyorganizinginformationaboutvariousmethodologies,techniques,and results in automatic seizure detection studies. Each aspect isintroducedanddiscussedinastructuredmanner,providinga comprehensive overview of the comparative analysis. 5. Overall comment: The paragraph effectively communicates the complexity and diversity of approaches in automatic seizure detection studies. With some minor adjustments for readability and syntax, it provides a thorough understanding of the topic.		
		Table1	Goodforinclusioninthispaper.		

		Paragraph11	Mycommentonthisparagraph: 1. Accuracy of Facts: The paragraph accurately describes the diverselandscape of methodologies, feature extraction techniques, andclassification algorithms employed in sleep disorder studies. ItcorrectlyidentifiesdeeplearningmodelslikeCNNsandRNNs,aswellas traditional machine learning algorithms such as SVM and RandomForest. The mention of various feature extraction methods, includingtime domain features, frequency domain features, and waveletdecomposition, reflects the breadth of techniques used in sleepdisorder analysis. The assertion regarding the prominence of deeplearning models and their superior performance is supported byevidencefromtheliterature. 2. Syntax:Theparagraphiswell-structured,providingaclearoverviewof the comparative analysis. However, some sentences could besimplified for clarity and flow. For example, the phrase “Studiesemploy a range of approaches, from deep learning models likeconvolutional neural networks (CNNs) and recurrent neural networks(RNNs) to traditional machine learning algorithms such as SupportVector Machines (SVM) and Random Forest” could be rephrased forsmoother readability, such as “Studies employ a range of approaches,including deep learning models like CNNs and RNNs, as well astraditionalmachinelearningalgorithmslikeSVMandRandomForest.” 3. Spelling & Grammar: Overall, the paragraph demonstrates goodspelling and grammar. However, there are a few instances whereminor adjustments could enhance readability. For example, thephrase “Notably, deep learning models emerge as prominent tools,showcasing their prowess in automatically learning intricate patternsfromrawdata,leadingtostate-of-the-artperformanceacrossvarioustasks” could be refined for clarity, such as “Deep learning modelsemerge as prominent tools, showcasing their ability to automaticallylearn intricate patterns from raw data and achieve state-of-the-artperformanceacrossvarioustasks.” 4. Coherence: The paragraph maintains coherence by logicallyorganizing information about methodologies, techniques, and resultsinsleepdisorderstudies.Eachaspectisintroducedanddiscussedinastructured manner, providing a comprehensive overview of thecomparativeanalysis. 5. Overall comment: The paragraph effectively communicates thecomplexity and evolution of methodologies in sleep disorder studies.Withsomeminoradjustmentsforreadabilityandsyntax,itprovidesathoroughunderstandingofthetopic.		
		Table2	Goodforinclusioninthispaper.		
		Paragraph12	Mycommentsonthisparagraph: 1. Accuracy of Facts: The paragraph accurately portrays the diversityof methodologies, feature extraction techniques, and classificationalgorithms employed in movement disorder diagnosis studies. ItcorrectlyidentifiesvariousdeeplearningarchitectureslikeCNNsandRNNs, as well as machine learning techniques such as SVMs, LR, andk-NN.ThementionofadvancedfeatureextractionmethodslikeWavelet transforms and synchronization likelihood (SL) featuresreflectsthecomplexityofsignalprocessinginvolvedinmovement disorder diagnosis. The assertion regarding high accuracy rates and the potential of machine learning and deep learning approaches is supported by evidence from the literature. 2. Syntax: The paragraph is well-structured, providing a clear overview of the comparative		

			analysis. However, some sentences could be improved for clarity and coherence. For instance, the phrase “Researchers employ various deep learning architectures such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), and their combinations to process EEG signals, ECG signals, and raw MRIs for diagnosis” could be rephrased for smoother readability, such as “Researchers utilize various deep learning architectures, including CNNs, RNNs, and their combinations, to process EEG signals, ECG signals, and raw MRIs for diagnosis.” 3. Spelling & Grammar: Overall, the paragraph demonstrates good spelling and grammar. However, there are a few instances where minor adjustments could enhance readability. For example, the phrase “Machine learning techniques like Support Vector Machines (SVMs), Logistic Regression (LR), and k-Nearest Neighbors (k NN)are also utilized” could be corrected to “Machine learning techniques like Support Vector Machines (SVMs), Logistic Regression (LR), and k- Nearest Neighbors (k-NN) are also utilized” to maintain consistency in the formatting of abbreviations. 4. Coherence: The paragraph maintains coherence by logically organizing information about methodologies, techniques, and results in movement disorder diagnosis studies. Each aspect is introduced and discussed in a structured manner, providing a comprehensive overview of the comparative analysis. 5. Overall comment: The paragraph effectively communicates the complexity and potential of machine learning and deep learning approaches in movement disorder diagnosis. With some minor adjustments for readability and syntax, it provides a thorough understanding of the topic.		
		Table3	Goodforinclusioninthispaper.		
		Paragraph13	Mycommentsonthisparagraph: 1. Accuracy of Facts: The paragraph accurately portrays the diversityof methodologies, feature extraction techniques, classificationalgorithms, and results in cognitive assessment using EEG data. Ithighlights the dominance of deep learning models and the significantrole of machine learning techniques, reflecting the current trends inthefield.Additionally,itcorrectlymentionsthevariabilityinreportedaccuracy rates, attributing them to factors like data quality andalgorithmchoice. 2. Syntax:Theparagraphiswell-structuredandeffectivelyconveysthekey points of the comparative analysis. The transitions betweendiscussing methodologies, results, and implications are smooth,contributing to the coherence of the paragraph. However, there is anopportunity to improve the flow by breaking down the sentence“Despite this variability, the studies collectively underscore thepotential of EEG-based cognitive assessment in detecting cognitivedecline, assessing cognitive workload, and differentiating cognitivestates, offering promising prospects for clinical diagnosis and human-machineinteractionenhancement”intosmaller,moredigestiblepartsforenhancedclarityandreadability. 3. Spelling&Grammar:Theparagraphdemonstratescorrectspellingand grammar, maintaining clarity and readability throughout.However,oneminorimprovementcouldbemadetoenhance readabilitybyreplacingthephrase“offeringpromisingprospects” with “which offer promising prospects”. 4. Coherence: The paragraph maintains coherence by effectively summarizing the key findings and implications of the comparative analysis. It highlights the potential of EEG-based cognitive assessment in various applications, including detecting cognitive decline and enhancing human-machine interaction, thereby providing a comprehensive overview of the field’s advancements. 5. Overall comment: The paragraph effectively critiques the comparative analysis of studies on cognitive assessment using EEG data, offering accurate information, clear structure, correct grammar, and coherent presentation of key findings. With minor adjustments for readability, it provides a thorough understanding of the topic.		
		Table4	Goodforinclusioninthispaper.		

		Paragraph14	Mycommentsonthisparagraph: 1. Accuracy of Facts: The paragraph accurately summarizes the keyaspects of the comparative analysis, including the diversemethodologiesemployedacrossstudies,suchasEEG-baseddetectionof epileptiform activity and MEG-based identification of mildtraumaticbraininjury.Itcorrectlyidentifiesvariousfeatureextractiontechniques and classification algorithms, reflecting the broadspectrum of analytical approaches used in the field. The mention ofpromising accuracies, with some studies exceeding 90%, aligns withthefindings reportedintheliterature. 2. Syntax: The paragraph is well-structured, with clear transitionsbetween different aspects of the comparative analysis. However, itcould benefit from breaking down some lengthy sentences intosmaller, more digestible segments to enhance readability and clarity.For example, the sentence “Moreover, the comparative analysishighlights the ongoing advancements in machine learning and deeplearning techniques, further enhancing the accuracy and reliability ofbraininjuryassessmentmethodsbasedonneuroimagingdata”couldbesplitintotwosentencesforimprovedflow. 3. Spelling & Grammar: The paragraph demonstrates correct spellingand grammar throughout, contributing to its clarity andprofessionalism.Nospellingerrorsorgrammaticalissuesareapparentinthetext. 4. Coherence: The paragraph maintains coherence by effectivelysummarizing the main findings and implications of the comparativeanalysis. It highlights the potential of EEG and MEG data as valuabletools in clinical settings for diagnosing brain injuries and monitoringpatient outcomes. Additionally, it emphasizes the role of ongoingadvancements in machine learning and deep learning techniques inenhancing the accuracy and reliability of brain injury assessmentmethods,providingacomprehensiveoverviewofthefield’sprogress. 5. Overall comment: The paragraph offers a well-rounded critique ofthe comparative analysis, providing accurate information, clearstructure,correctgrammar,andcoherentpresentationofkeyfindings.Withminoradjustmentsforsyntaxandstructure,itwouldfurther enhancereadabilityandclarity.		
		Table5	Goodforinclusioninthispaper.		
		Paragraph15on Conclusion	Mycommentsonthisparagraph: 1.AccuracyofFacts:Theparagraphaccuratelyportraysthesignificantadvancements achieved in the application of deep learning andmachine learning approaches to neurological diagnoses. It correctlyidentifies the adaptability and efficacy of computational approachesin identifying patterns from complex neuroimaging data acrossvariousdomainssuchasseizuredetection,cognitiveevaluation,and		

			brain damage prediction. The mention of the need for integratingmultimodalneuroimagingdataandstandardizingapproachesalignswithcurrent challengesandopportunitiesinthefield. 2. Syntax: The paragraph is well-structured, with clear transitionsbetween different aspects of the comparative analyses. It effectivelyconveys the main points, discussing the adaptability and efficacy ofcomputational approaches, the potential of automated diagnosticsystems, and the challenges that need to be addressed for fullrealization of this potential. However, it could benefit from somerefinementinsentencestructuretoimprovereadability.Forexample,thephrase“Theseresearchdemonstrate”couldbecorrectedto“Thisresearchdemonstrates.” 3. Spelling&Grammar:Theparagraphdemonstratescorrectspellingand grammar, contributing to its clarity and professionalism. Nospellingerrorsorgrammaticalissuesareapparentinthetext. 4. Coherence: The paragraph maintains coherence by effectivelysummarizing the main findings and implications of the comparativeanalyses. It highlights the transformative potential of automateddiagnostic systems in clinical practice while acknowledging thechallenges that need to be addressed for their full realization. Thediscussion of integrating multimodal neuroimaging data andstandardizingapproachesaddsdepthtothecritique,demonstratingan understanding of the broader context in which theseadvancementsareoccurring. 5. Overall comment: The paragraph offers a well-rounded critique ofthe comparative analyses, providing accurate information, clearstructure,correctgrammar,andcoherentpresentationofkeyfindings.Withminoradjustmentsforsyntaxandstructure,itwouldfurther enhancereadabilityandclarity.		

		Paragraph16onfuturedirectives	Mycommentsonthisparagraph: 1. AccuracyofFacts:Theparagraphaccuratelyportraysthepromisingfuture prospects for neuroimaging-based diagnostics research. Itcorrectly identifies the development of novel approaches for earlydetection and personalized treatment planning, the improvement ofcurrent diagnostic tools, and the exploration of synergies betweendifferent modalities to deepen the understanding of neurologicaldisorders. The mention of advancements in machine learning anddeep learning techniques driving these developments aligns withtrendsinthefield. 2. Syntax: The paragraph is well-structured, with clear transitionsbetweendifferentaspectsoffutureprospectsforneuroimaging-baseddiagnostics research. However, some sentences could be refined forimproved clarity and flow. For instance, the phrase “making surealgorithmic decision-making is transparent and equitable” could berephrased for better readability, such as “ensuring transparency andequityinalgorithmic decision-making.” 3. Spelling&Grammar:Theparagraphdemonstratescorrectspellingand grammar, contributing to its clarity and professionalism. Nospellingerrorsorgrammaticalissuesareapparentinthetext. 4. Coherence: The paragraph maintains coherence by effectivelysummarizing the future directions and considerations inneuroimaging-based diagnostics research. It discusses the potentialfor advancements in technology, ethical considerations regardingalgorithmic decision-making, and the importance of multidisciplinarypartnershipsinbridgingthegapbetweencomputationalneuroscienceandclinicalpractice.Theparagraphconcludeswithavisionofanew ageofprecisionmedicineenabledbycomputationaltechniquesand neuroimaging data, offering personalized patient care based on insights into the human brain. 5. Overall comment: The paragraph provides a thoughtful critique of future prospects for neuroimaging-based diagnostics research, offering accurate information, clear structure, correct grammar, and coherent presentation of key ideas. With minor adjustments for syntax and structure, it would further enhance readability and clarity.		

PART 2:

	Reviewer’s comment	**Author’s comment***(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	**Guo-Hui Xie**
Department, University & Country	**Merlion Paediatric Therapy Centre, Merlion Academy, Singapore**