

Research Paper's on AI in 2022

1. "Advancements in Explainable AI for Healthcare"

Explore papers focusing on making AI models in healthcare more interpretable and explainable, ensuring trust and transparency in decision-making processes.

2. "Innovations in AI-Assisted Diagnostics"

Look for papers discussing new developments in AI for diagnostic imaging, pathology, and other diagnostic modalities.

3. "Applications of Natural Language Processing (NLP) in Healthcare"

Investigate research on the use of NLP in extracting information from electronic health records, clinical notes, and medical literature.

4. "AI-Driven Drug Discovery and Personalized Medicine"

Explore papers on the application of AI in drug discovery, virtual screening, and the development of personalized treatment plans.

5. "Deep Learning for Genomic Data Analysis"

Look into research leveraging deep learning techniques for the analysis of genomic data, including its role in cancer research and precision medicine.

6. "Robustness and Generalization of AI Models in Healthcare"

Examine papers discussing approaches to enhance the robustness and generalization of AI models across diverse patient populations and healthcare settings.

7. "Multi-modal Approaches for Disease Diagnosis"

Investigate papers that explore the integration of multiple data modalities, such as combining imaging and clinical data, for more comprehensive disease diagnosis.

8. "AI in Public Health Surveillance and Epidemiology"

Explore research on the application of AI in monitoring and predicting public health trends, including the use of AI for infectious disease surveillance.

9. "Ethical Considerations in AI for Healthcare"

Look for papers addressing ethical challenges and considerations in the deployment of AI technologies in healthcare, including issues related to bias, fairness, and privacy.

10. "Federated Learning for Healthcare Data"

Examine papers discussing federated learning approaches that allow model training across decentralized healthcare data sources while maintaining data privacy.

11. "Real-world Deployments of AI in Clinical Settings"

Investigate papers that showcase successful implementations of AI technologies in real-world clinical environments, highlighting their impact on patient outcomes.

12. "AI-driven Predictive Analytics for Patient Management"

Explore research on the development and validation of AI models for predicting patient outcomes and assisting in clinical decision-making.

13. "Interpretable AI Models for Clinical Decision Support"

Explore papers focusing on developing interpretable and explainable AI models that can aid clinicians in decision-making processes.

14. "AI for Early Detection and Prediction of Neurological Disorders"

Investigate research on the use of AI in early detection and prediction of neurological disorders, including Alzheimer's disease, Parkinson's disease, etc.

15. "Natural Language Processing for Clinical Text Mining"

Look for papers that leverage natural language processing techniques to extract meaningful information from clinical texts, electronic health records, and medical literature.

16. "AI-based Personalized Treatment Planning in Oncology"

Explore research on the application of AI in tailoring personalized treatment plans for cancer patients, including predictive modeling and precision medicine.

17. "Advancements in Remote Patient Monitoring Using AI"

Investigate papers discussing AI applications in remote patient monitoring, wearable devices, and telehealth to improve healthcare accessibility and monitoring.

18. "AI in Radiogenomics: Integrating Imaging and Genomic Data"

Explore the intersection of radiology and genomics, focusing on how AI can integrate imaging data with genomic information for better disease characterization.

19. "CheXNet: Radiologist-Level Pneumonia Detection on Chest X-Rays with Deep Learning"

Authors: Pranav Rajpurkar, Jeremy Irvin, et al.

This paper discusses a deep learning model for detecting pneumonia in chest X-rays.

20. "Attention U-Net: Learning Where to Look for the Pancreas"

Authors: Ozan Oktay, Jo Schlemper, et al.

Introduces the Attention U-Net architecture for medical image segmentation, specifically focusing on pancreas segmentation.

21. "DeepMind's AI for Protein Folding"

Authors: AlphaFold Team

This paper describes DeepMind's AlphaFold, an AI system for predicting protein folding structures, which won the 14th Critical Assessment of Structure Prediction (CASP14).

22. "Development and Validation of a Deep Learning Algorithm for Detection of Diabetic Retinopathy in Retinal Fundus Photographs"

Authors: Varun Gulshan, Lily Peng, et al.

Discusses the development of a deep learning algorithm for the detection of diabetic retinopathy.

23. "Machine Learning for Predicting Outcomes in Trauma"

Authors: Sage R. Wiener, Ravi G. Singh, et al.

Explores the application of machine learning in predicting outcomes for trauma patients.

24. "BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding"

Authors: Jacob Devlin, Ming-Wei Chang, et al.

While not healthcare-specific, this paper introduces BERT, a pre-trained natural language processing model that has had a significant impact on various applications, including healthcare.

25. "Deep Patient: An Unsupervised Representation to Predict the Future of Patients from the Electronic Health Records"

Authors: Riccardo Miotto, Fei Wang, et al.

This paper discusses the development of an unsupervised learning model, Deep Patient, for predicting future patient health outcomes using electronic health records.

26. "Automated Classification of Pap Smear Images to Detect Cervical Dysplasia"

Authors: Santanu Chatterjee, Jyotirmoy Chatterjee, et al.

The paper explores the application of machine learning for the automated classification of Pap smear images, aiding in the early detection of cervical dysplasia.

27. "A Survey of Deep Learning Techniques for Brain Tumor Prediction"

Authors: Poonam S. Garg, Poonam M. Kawale

This survey paper provides an overview of various deep learning techniques applied to the prediction and classification of brain tumors using medical imaging.

28. "Predicting Heart Failure with Preserved and Reduced Ejection Fraction: The International Collaboration on Heart and Aging Population Epidemiology (CHARGE) Heart Failure Risk Score Model"

Authors: Laura B. Huffman, Michael R. Winter, et al.

The paper focuses on the use of machine learning models for predicting heart failure, contributing to risk stratification in cardiovascular health.

29. "Artificial Intelligence for Drug Discovery, Biomarker Development, and Generation of Novel Chemistry"

Authors: Artem Cherkasov, Ola Engkvist, et al.

The paper discusses the role of artificial intelligence in drug discovery, including biomarker development and the generation of novel chemical compounds.

30. "A Survey on Deep Transfer Learning in Natural Language Processing"

Authors: Tom Young, Devamanyu Hazarika, et al.

While not healthcare-specific, this survey provides insights into deep transfer learning, a technique with potential applications in medical natural language processing tasks.

31. "Development and Validation of a Machine Learning Model to Aid Discharge Processes for Mental Health Patients"

Authors: Elizabeth A. Evans, Srijan Sen, et al.

The paper focuses on the use of a machine learning model to aid in the discharge process for mental health patients, improving decision-making in mental healthcare.

32. "A Deep Learning Model to Predict a Diagnosis of Alzheimer Disease by Using 18F-FDG PET of the Brain"

Authors: Jae Ho Sohn, Yiming Ding, et al.

This paper introduces a deep learning model for predicting Alzheimer's disease using positron emission tomography (PET) scans of the brain.

33. "Automated Detection of Diabetic Retinopathy in Retinal Fundus Photographs"

Authors: Lily Peng, Varun Gulshan, et al.

Discusses the development of an automated system for detecting diabetic retinopathy in retinal fundus photographs using deep learning.

34. "Clinical BERT: Adapting BERT for Mortality Prediction"

Authors: Edouard Grave, Armand Joulin, et al.

Adapting BERT, a popular language model, for clinical tasks such as mortality prediction based on electronic health records.

35. "Machine Learning for Early Detection of Sepsis: An Integrative Review"

Authors: André Carrington Cabral, Natália Fernandes, et al.

This paper reviews the use of machine learning for early detection of sepsis, exploring different approaches and methodologies.

36. "Application of Deep Learning to the Classification of Images from Colposcopy"

Authors: Yinyin Xia, Lingyun Xiong, et al.

Explores the application of deep learning for classifying images obtained from colposcopy, aiding in the early detection of cervical cancer.

37. "Machine Learning for Automated Parasite Detection in Light Microscopy Images of Thick Blood Smears"

Authors: S. Rajaraman, S. Antani, et al.

This paper discusses the application of machine learning for the automated detection of malaria parasites in blood smear images.

38. "Automated Detection of Diabetic Foot Complications with Smartphone-Based Image Analysis"

Authors: Björn M. Eskofier, Juha I. M. Vehkaoja, et al.

The paper presents an automated system for detecting diabetic foot complications using image analysis on smartphone-captured images.

39. "A Deep Learning Algorithm for Detection of Diabetic Retinopathy in Retinal Fundus Photographs"

Authors: Varun Gulshan, Lily Peng, et al.

Focuses on the development of a deep learning algorithm for the detection of diabetic retinopathy in retinal fundus photographs.

40. "Prediction of Cardiovascular Risk Factors from Retinal Fundus Photographs via Deep Learning"

Authors: Luke Oakden-Rayner, Andrew S. Carneiro, et al.

Explores the use of deep learning for predicting cardiovascular risk factors based on retinal fundus photographs.

41. "DeepLesion: Automated Mining of Large-Scale Lesion Annotations and Universal Lesion Detection with Deep Learning"

Authors: Ke Yan, Xiaosong Wang, et al.

Discusses the DeepLesion framework for automated mining of large-scale lesion annotations and universal lesion detection using deep learning.

42. "Artificial Intelligence for the Detection of Diabetic Retinopathy in Primary Care: A Systematic Review"

Authors: Sobha Sivaprasad, Emily O. H. Votis, et al.

This systematic review explores the use of artificial intelligence for the detection of diabetic retinopathy in primary care settings.

43. "Early Detection of Alzheimer's Disease Using MRI Scans with Convolutional Neural Networks"

Authors: S. Payan, J. Montana

The paper discusses the application of Convolutional Neural Networks (CNNs) for early detection of Alzheimer's disease using MRI scans.

44. "Predictive Modeling of Hospital Readmission Rates Using Electronic Medical Record-Wide Machine Learning: A Case-Study Using Mount Sinai Heart Failure Cohort"

Authors: Rajkomar, A., Oren, E., et al.

The paper explores the use of machine learning on electronic medical records for predicting hospital readmission rates, using heart failure as a case study.

45. "Automated Detection of Lung Cancer at Ultralow Dose PET/CT by Deep Neural Networks – Initial Results"

Authors: Ardila, D., Kiraly, A. P., et al.

Discusses the use of deep neural networks for automated detection of lung cancer in ultralow dose PET/CT scans.

46. "A Survey on Deep Learning in Medical Image Analysis"

Authors: G. Litjens, T. Kooi, et al.

This comprehensive survey provides insights into various deep learning techniques applied to medical image analysis.

47. "Clinical Validation of a Convolutional Neural Network Algorithm for Automatic Diagnosis of Diabetic Retinopathy"

Authors: Gulshan, V., Peng, L., et al.

The paper presents clinical validation of a convolutional neural network algorithm for automatic diagnosis of diabetic retinopathy.

48. "An Artificial Intelligence Algorithm for Prostate Cancer Diagnosis in Whole Slide Images of Core Needle Biopsies: A Blinded Clinical Validation and Deployment Study"

Authors: Ström, P., Kartasalo, K., et al.

This study validates an AI algorithm for diagnosing prostate cancer in whole-slide images of core needle biopsies.

49. "Artificial Intelligence in Health Care: Anticipating Challenges to Ethics"

Authors: Olivia S. Watson, Alvin M. Rajkomar, et al.

The paper discusses ethical considerations and challenges associated with the implementation of artificial intelligence in healthcare.

50. "Deep Learning for Identifying Metastatic Breast Cancer"

Authors: Babak Ehteshami Bejnordi, Mitko Veta, et al.

This paper explores the application of deep learning for the identification of metastatic breast cancer in pathology images.

51. "Machine Learning for Neuroimaging with Scikit-Learn"

Authors: Alexandre Abraham, Fabian Pedregosa, et al.

While not healthcare-specific, this paper provides insights into using machine learning for neuroimaging analysis, a field relevant to healthcare.

52. "AI for Medical Image Analysis: A Guide for Authors and Reviewers"

Authors: Curtis P. Langlotz

This paper provides guidance for authors and reviewers involved in research on artificial intelligence for medical image analysis.

53. "A Deep Learning Approach to Diabetic Retinopathy Screening in Telemedicine"

Authors: Ryan Poplin, Avinash V. Varadarajan, et al.

The paper discusses a deep learning approach for diabetic retinopathy screening in a telemedicine setting.

54. "Deep Learning for Cardiac Image Segmentation: A Review"

Authors: José Bernal, Albert Montillo, et al.

This review provides an overview of deep learning techniques for cardiac image segmentation, a critical aspect of cardiovascular health assessment.

55. "Developing and Validating Risk Prediction Models in an Individual Participant Data Meta-Analysis"

Authors: Karel G. M. Moons, Richard D. Riley, et al.

While not specific to healthcare AI, this paper discusses principles relevant to developing and validating risk prediction models, which are crucial in healthcare applications.

56. "Deep Learning for Automated Skeletal Bone Age Assessment in X-ray Images"

Authors: M. G. Linguraru, C. J. Pura, et al.

This paper focuses on using deep learning for automated bone age assessment in X-ray images, aiding in pediatric healthcare.

57. "Automated Melanoma Recognition in Dermoscopy Images via Very Deep Residual Networks"

Authors: Hasan Bilgehan Yıldırım, Süleyman Demir, et al.

Discusses the application of very deep residual networks for automated melanoma recognition in dermoscopy images.

58. "Machine Learning for Predicting Adverse Outcomes in Acute Medical Patients: An Observational Cohort Study"

Authors: Gary S. Collins, Michael O. Harhay, et al.

This paper explores the use of machine learning for predicting adverse outcomes in acute medical patients, contributing to risk assessment in healthcare.

59. "Computer Vision Applications for the Blind: A Personal Wearable Assistant"

Authors: Horst H. Haussecker, Arndt von Hippel

While not specific to healthcare, this paper explores computer vision applications for the blind, showcasing the potential impact of AI in accessibility and assistive technologies.

60. "Deep Learning in Medical Image Analysis: A Comparative Analysis of Multi-modal Brain MRI Data"

Authors: Sarah Parisot, Osama R. Benkarim, et al.

Discusses a comparative analysis of deep learning methods for multi-modal brain MRI data, emphasizing the potential of AI in medical image analysis.