Title	Author	Discription	Conclusion	Link	
Eye-tracking Dataset to Support the Research on Autism Spectrum Disorder	Federica Cilia Romuald Carette Mahmoud Elbattah Gilles Dequen	This study introduces a raw eye-tracking dataset to support autism research, focusing on early diagnosis of Autism Spectrum Disorder (ASD). Since **individuals with ASD often show reduced eye contact**, eye-tracking is seen as a useful tool for screening. The dataset, created through collaboration between psychology and AI experts, allows researchers to analyze gaze patterns for ASD detection.	The study offers an eye-tracking dataset for autism research, useful for analyzing gaze behavior and supporting early ASD diagnosis through machine learning. Despite its value, the dataset has two main limitations: a small number of participants and short experiment duration (around 5 minutes).	https://www.researchgate.net/publication/369708398_Eye-tracking_Dataset_to_Support_the_Research_on_Autism_Spectrum_Disorder	
Learning to Predict Autism Spectrum Disorder based on the **Visual Patterns of Eye-tracking Scanpaths**	Romuald Carette Mahmoud Elbattah Federica Cilia Gilles Dequen Jean-Luc Guerin Jérôme Bosche	The study proposes a novel method to aid in diagnosing Autism Spectrum Disorder (ASD) by analyzing visual scanpaths generated from eye-tracking data. These scanpaths are transformed into image representations that encode motion dynamics such as velocity, acceleration, and jerk using color gradients (e.g., red for velocity, green for acceleration, blue for jerk). This image-based approach enables the use of convolutional neural networks (CNNs) to classify ASD vs. non-ASD participants, treating the problem as a standard image classification task.The dataset used includes 547 scanpath images derived from 59 children (29 with ASD and 30 without). The study also applies data augmentation techniques to increase the dataset by generating synthetic variations of the original images, helping the models generalize better.	Despite a relatively small dataset and short experiment durations (≈5 minutes), the proposed method demonstrated high accuracy (AUC > 0.9) using simple neural networks. This indicates that visual patterns in eye movement can be effectively leveraged to support early and accurate ASD diagnosis. The work highlights the potential of combining eye-tracking data with AI to create non-invasive, scalable diagnostic tools. The dataset and approach also open avenues for further research in both clinical and technical domains.	https://www.researchgate.net/publication/331784416_Learning_to_Predict_Autism_Spectrum_Disorder_based_on_the_Visual_Patterns_of_Eye-tracking_Scanpaths	Dataset Link : https://mahmoud-elbattah.github.io/ML4Autism/
Applying Eye Tracking to Identify Autism Spectrum Disorder in Children	Guobin Wan Xue-Jun Kong Binbin Sun Siyi Yu Yiheng Tu Joel Park Courtney Lang Madelyn Koh Zhen Wei Zhe Feng Yan Lin Jian Kong	Eye tracking (ET) holds potential for the early detection of autism spectrum disorder (ASD). To overcome the difficulties of working with young children, developing a short and informative paradigm is crucial for ET. We investigated the fixation times of 37 ASD and 37 typically developing (TD) children ages 4–6 watching a 10-second video of a female speaking.	ASD children showed significant reductions in fixation time at six areas of interest. Furthermore, discriminant analysis revealed fixation times at the mouth and body could significantly discriminate ASD from TD with a classification accuracy of 85.1%, sensitivity of 86.5%, and specificity of 83.8%. Our study suggests that a short video clip may provide enough information to distinguish ASD from TD children.	https://www.researchgate.net/publication/326965445_Applying_Eye_Tracking_to_Identify_Autism_Spectrum_Disorder_in_Children	
Computer-Aided Screening of Autism Spectrum Disorder Using Eye-Tracking, Data Visualization and Deep Learning	Federica Cilia Romuald Carette Mahmoud Elbattah Gilles Dequen Jean-Luc Guerin Jérôme Bosche Luc Vandromme Barbara Le Driant	The paper explores the use of eye-tracking data, visual representations, and convolutional neural networks to aid in the early diagnosis of Autism Spectrum Disorder (ASD). By analyzing gaze patterns of 59 participants viewing socially relevant images and videos, the study demonstrates that machine learning can accurately classify ASD characteristicS.	The conclusion highlights that this integrated approach offers strong potential for developing an objective, computer-assisted screening tool for ASD and possibly other neurodevelopmental disorders.	https://www.researchgate.net/publication/351831478_Computer-Aided_Screening_of_Autism_Spectrum_Disorder_Using_Eye-Tracking_Data_Visualization_and_Deep_Learning	