In this work, we included 29 subjects aged 5-14 years. All subjects were diagnosed by a medical practitioner using the psychiatric disorders (ADHD or ASD) using the Autism-Spectrum Quotient (AQ) and the ADHD-Rating Scale-IV (ADHD-RS-IV). Depending on the rating scales, subjects were classified as ADHD children with coexisting ASD and healthy children. We found that 14 subjects had ADHD with coexisting ASD (age: 5-14 years) and the remaining 15 subjects had no disorder or were healthy (age: 8-12 years). To ensure the anonymity of participants, we removed demographic characteristics (age and gender) from the data set.

We asked each subject to sit on a desk in a such way that their feet touched the floor and kept the pen tablet near the center of their body. At the same time, we set the distance between the pen tablet and their eyes at about 40 cm. In this work, two handwriting patterns were implemented such as zigzag lines (ZL) and periodic line (PL). Each pattern had two conditions including trace and predict.

One can easily download the preprocessed dataset and associated codes at the following link:

https://www.u-aizu.ac.jp/labs/is-pp/pplab/ADHD-ASD-HANDWRITING/ADHD-ASD-Dataset.zip

The above link had two files as (i) Dataset and (ii) ML-Codes. The dataset has four files as Zigzag Trace, Zigzag Predict, Periodic Trace, and Periodic Predict. Each dataset had 30 feature and one class variable. In class variable, “1” represents ADHD-ASD and “0” represents Healthy Control.