

# Research on ASD, and solutions using Robotics

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## Abstract

**ASD:** The autism spectrum is a range of neurodevelopmental conditions generally characterized by difficulties in social interactions and communication, repetitive behaviors, intense interests, and unusual responses to sensory stimuli. It is commonly referred to as autism or, in the context of a professional diagnosis, as autism spectrum disorder (ASD).

## Resolution

- This solution provides multiple repetition executions, which are sometimes frustrating or hard to do for the caregivers of ASD children.
- The robot takes most of the attention of the child because of its existence in the physical world, and being an unusual object that is capable of interaction.
- The more and more robust start to be available for the public, the easier the treatment for ASD children is going to be.

## Motivation

- Many children with ASD symptoms are having some difficulty learning new objectives.
- Many of the caregivers of ASD children have difficulty with getting the attention of the children.
- ASD is short for autism spectrum disorder, which is a developmental disability caused by differences in the brain.
- Many of the children have a hard time interacting with the repetition with instructors.

## Approach

The Solution aims to help the child with a treatment . How?

The robot has three categories for the apps, and a total of four games .

Daily activities (Crossing the road)

English (Teaching the alphabet)

Math(Random numbers choices, and Even or Odd number

identifying)

These applications are way to help the child understand the interaction, paying attention, contributing to a conversation, and understand important concepts such as language, responsibilities, and numbers.



Figure 1

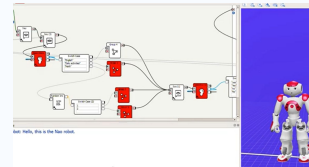


Figure 2

Using this solution would provide the patient with a learning environment capable of teaching human interaction, social skills, environment analysing, maintaining focus and decreasing anxiety.

## References

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