

YOLO – Your Own Living Object

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ABSTRACT

Creativity is at the core of what it means to be human. It is an intrinsic ability that we all have and influences our well-being self-expression throughout life. However, a decline in creativity abilities occurs in children around the age of 7 years old. Our work aims to contribute to a re-balance of creative levels using social robots. In this video, we describe YOLO, an autonomous robotic toy for children that fosters their creativity during play. This robot is envisioned to be used as a character during storytelling, promoting creative story-lines that might not emerge otherwise.

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1 INTRODUCTION

Creativity is defined as the ability to produce something that is both novel and useful within a social context [1]. It is an important ability to have, as it promotes healthy development in which competencies of problem solving and thinking outside of the box are nurtured, stimulated, and rewarded in later life stages [2]. Creativity during childhood appears as a predictor of creativity levels in adulthood [3]. Therefore, it is crucial to stimulate this ability in the early stages of life. However, creativity levels fluctuate during the lifespan and suffer a first major decline around the age of 7 years old, in a phenomena named the “creativity crisis” [4]. Notwithstanding, creativity can be developed with proper training and interventions for creativity have been validated showing varying degrees of effectiveness [5]. This work aims to contribute to the development of robots that can be used to empower creativity. Therefore, we have designed, fabricated, and tested YOLO (“Your Own Living Object”), a robot meant to boost creativity in children.

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Figure 1: Child playing with YOLO.

2 TECHNICAL OVERVIEW AND VIDEO

Our video (<https://youtu.be/e-K3J5UZ9M4>) shows YOLO, a robot for children aimed at stimulating their creativity during play (see Figure 1). YOLO is a small and light-weight robotic toy that acts autonomously during children’s play to develop their creativity and uses minimalistic expressive behaviors (i.e., lights and movements). It uses two techniques: (1) *Mirroring* is used to stimulate convergent thinking as YOLO mimics the play motions performed by children, converging on ideas for the story; (2) *Contrasting* is used to stimulate divergent thinking as YOLO contrasts play motions aiming for a twist in the plot. YOLO decides which technique to use according to the storytelling stage where children are, which is associated to different story timings.

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