

# Robot, Tell Me a Bedtime Story

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**Abstract.** This paper describes a project that programs a humanoid robot to tell a bedtime story to young children. The focus of the project was to transform the robot from a simple machine into a semi-interactive storytelling machine that can be used at home with elderly persons and children as well as in libraries for storytelling corners.

## 1. Objective

The purpose and overall goal of the project was to create a semi-interactive program using the NAO robot that could effectively act out the telling of a preprogrammed story. With stories of varied length utilizing timeless classics, such as the Pied Piper, to new stories made up by the user, the robot has the capacity to provide gestures while telling the story. This provides a level of depth and a captivating presentation.

## 2. Outcome

The results of this project were extraordinary. The robot itself can hold the interest of people, but when combined with motion and gestures, the robot was entertaining to watch. My children, despite never having seen the robot in person, were fascinated with videos of the robot; they asked me if we could buy one and when they could play with it. With children showing so much interest in this robot and its storytelling, I foresee that it could be used for a variety of other things. One use could be at a child's bedtime: Parents

could utilize the robot for story time allowing them freedom to do other. Another application could be story telling to elderly people, which could provide them with comfort and entertainment either in a group setting or one-on-one.

### **3. Future Research**

Combining other features of the robot, such as facial recognition and movement tracking, to storytelling, the robot could be programmed to recognize children and remember who they are. This could add to the capacity and engagement of the robot through stories where the robot incorporates the recognized child's name into the story.

For future development, I would like to implement premade segments of stories. These segments, such as motions and actions, could be interwoven in order to give the user more flexibility in story choice. With further development, multiple robots could be programmed to work together to perform simple plays. The combination of music and sound effects would also add character to the story and allow it to be more immersive.

As the robot becomes more affordable, it could be placed into libraries for storytelling corners to entertain children, allowing both parents and librarians to focus on their business and to free up their day.

### **4. Conclusion**

The project was a great success. The robot captivated the audience and told the story perfectly. The movements came out great and the story almost came to life. With a little more work the story would be even more enthralling and could embrace a wider audience. The integration of this technology into the home would not only benefit the parents but the children as well.