CS CAPSTONE PROGRESS REPORT

DECEMBER 4, 2017

# HOW TO MAKE AN EFFECTIVE ROBOT COMEDIAN

PREPARED FOR

OREGON STATE UNIVERSITY

HEATHER KNIGHT

PREPARED BY

GROUP 13
AKA ROBOTICS

ARTHUR SHING
KEVIN TALIK
ANISH ASRANI

**Abstract**

Hello abstract

# CONTENTS

## 1 Introduction/Problem

A lot of the machines that surround us aren't very engaging to interact with. They serve their purpose, people get what they need, and the interaction is over. People do not consider robots as entities. That is the gap we are trying to close by performing stand-up comedy with a robot. Stand-up comedy is a casual and entertaining way for people to get more exposure to robots and see that robots are not just objects, but they are much more than that.

An effective robot comedian should be able to entertain the audience and generate laughs. We hypothesize that the effectiveness is dependent on three major aspects - crowd-work or the ability to integrate the audience in the performance, portraying a coherent and convincing character, and the ability to adapt the performance based on audience feedback. We will base our performances and studies around these three areas.

## 2 Progress So Far

We managed to get a lot more time to work with the robot over the past few weeks. This has helped us better understand how it works and what we can do with it. We have managed to put together some simple comedy scripts and interactive sets that take into consideration the feedback from the audience using speech recognition. We perform a fair bit of animations with the robot as well.

## 3 Issues and Solutions

One of the issues we have had so far is coming up with material to write for the robot. Unsurprisingly, being funny is not easy and a lot goes into making a reasonable script that works well with the robot and appeals to other people. Overcoming this will involve gaining a lot more experience with the robot, and exposure to different kinds of comedy.

Animating the robot can be tricky as well. Each keyframe needs to be stored in a timeline block and the animation needs to iterate through these frames at a reasonable rate. Push the animations too fast and the robot will topple over and fall flat on its face. Have the animations too slow, and it goes out of sync from the joke it is trying to say. Timing each word to correctly match the animation can be tedious and time-consuming. This will come down to practice and working more and more with the robot to get an idea of what "works" and what does not. (Can someone put a diagram for timeline here?)

The voice recognition on the robot can inconsistent sometimes. The range on the microphone isn't the greatest either. It will miss our cues completely at times, or go in a whole different direction sometimes. (Solution??)

While working on the robot, the robot needs breaks pretty regularly or it overheats. This can break the flow while testing and eliminates the possibility of longer performances/sets. There is not much we can do about it other than plan our scripts around the restrictions.

Outside the robot, one of the major issues we faced was writing documentation for the class as a research group.

## 4 Retrospective

### 4.1 Positives

### 4.2 Changes Required

### 4.3 Actions

## REFERENCES