“How might we design natural and intuitive interactions between humans and robots?”

Robots have traditionally been used in very specific settings where they primarily interact with trained professionals and perform specific actions. As robots find their way into our households and daily lives...

**FACE TRACKING**
SIM is able to appear attentive and interested in interactions by orienting itself to the user.

**EMOTION RECOGNITION**
SIM can recognize emotions by analyzing the user’s facial expressions in real-time.

**EMOTION RECOGNITION**
FACE TRACKING

**EXPRESSIVE BEHAVIORS**
SIM is capable of communicating emotions and life-like behaviors inspired by Disney’s Principles of Animation.

**HARDWARE**
SIM uses a 3-axis motor system, an Android phone, and custom 3D printed parts for assembly.

**RESEARCH**
From existing research, we synthesized the Social Interaction Model (SIM) to govern the robot’s behavior.

**DESIGN**
We sketched character designs and created a virtual 3D model to test different expressions and motions.

**PROTOTYPE**
We exported the animations to a physical prototype built using stock motors and custom 3D-printed parts.

**TEST**
Two versions of SIM were put in front of users to validate and test the effectiveness of the Social Interaction Model.

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**ABOUT SIM**

**TEAM**
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John LUETKE
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Dorothy WONG

**APPROACH**

**DESIGN QUESTION**

**INTRODUCTION**
"How might we design natural and intuitive interactions between humans and robots?"

**THE SOCIAL ROBOT**

**TEST**
Two versions of SIM were put in front of users to validate and test the effectiveness of the Social Interaction Model.