

Draft1

Low Risk (Baxter Performs Task)
Low Severity (Little Risk of Damage)

| | |
|--|---|
| No Human Interaction | Baxter tapes something to wall Baxter Displays Image On Face (something wrong with image) |
| Uninvolved Human Bystander (Same as No Human But With Bystander) | Baxter tapes something to wall Baxter Displays Image On Face |
| Human Interacting With Robot | Baxter "Points" at Colored Blocks Based On Color Person Holds Up. |
| Human Controlling Robot | Human Typing Message to Be displayed on Baxter's Screen? Baxter's Arm Does Not Move, or Just shivers when prompted with Joystick |

Notes:

1. Another Robot maybe necessary for simulating "on board" interaction with the robot.
2. Perhaps a Turtlebot can be brought in for non-humanoid test.

ask Devoid of Expression or Erratic Behavior or Person Shown
Med Severity (possible inexpensive damage)

Baxter Failing to Stack Blocks or doing something near
something delicate

Baxter uses a keyboard (badly)

Baxter gets itself stuck on obstacle (table for example)

Baxter Failing to Stack Blocks

Baxter uses a keyboard (badly)

Baxter gets itself stuck on obstacle (table for example)

Baxter Plays "Catch" with hard object (Arm goes to ceiling,
arm goes misthrows etc...)

If throwing likely not feasible Baxter has trouble finding
person's hand, potentially hits person by accident

Camera Lag, Baxter Tries to Grab Hand where it was.

Human Doesn't Realize gripper is stuck on table

Preemptive video of Baxter Succeeding)
High Severity (Danger to Person or Costly Damage)

Baxter Knocking Over “Expensive” Equipment
Baxter gets stuck in loop, arm going crazy

Baxter Nearly Runs into Person At Desk

Baxter Pours “Hot” Coffee into a cup human is holding
Baxter drops something heavy handed to him by a
person

Baxter Arm Movement Unresponsive to Joystick, Moves
Erratically

Draft1

| | |
|---|---|
| | Med Risk (Baxter Displays Some Caution and Erratic) |
| Low Severity | Med Severity |
| Baxter tapes something to wall | Baxter Failing to Stack Blocks or doing something near something delicate |
| Baxter Displays Image On Face (something wrong with image) | Baxter uses a keyboard (badly) |
| | Baxter gets itself stuck on obstacle (table for example) |
| Baxter tapes something to wall | Baxter Failing to Stack Blocks |
| Baxter Displays Image On Face | Baxter uses a keyboard (badly) |
| | Baxter gets itself stuck on obstacle (table for example) |
| Baxter "Points" at Colored Blocks Based On Color Person Holds Up. | Baxter Plays "Catch" with hard object (Arm goes to ceiling, arm goes misthrows etc...) |
| | If throwing likely not feasible Baxter has trouble finding person's hand, potentially hits person by accident |
| Human Typing Message to Be displayed on Baxter's Screen? | |
| Baxter's Arm Does Not Move, or Just shivers when prompted with Joystick | Human Doesn't Realize gripper is stuck on 1 |

c Behavior)
High Severity

Baxter Knocking Over “Expensive”
Equipment
Baxter gets stuck in loop, arm going crazy

Baxter Nearly Runs into Person At Desk

Baxter Pours “Hot” Coffee into a cup
human is holding
Baxter drops something heavy handed to
him by a person

Baxter Arm Movement Unresponsive to
Joystick, Moves Erratically

Draft1

Hig

Low Severity

Baxter tapes something to wall
Baxter Displays Image On Face (something wrong with image)

Baxter tapes something to wall
Baxter Displays Image On Face

Baxter "Points" at Colored Blocks Based On Color Person Holds Up.

Human Typing Message to Be displayed on Baxter's Screen?
Baxter's Arm Does Not Move, or Just shivers when prompted with Joystick

h Risk (Baxter Displays Confusion and Highly Erratic Behavior or Person is Shown Pree
Med Severity

Baxter Failing to Stack Blocks or doing something near something delicate

Baxter uses a keyboard (badly)

Baxter gets itself stuck on obstacle (table for example)

Baxter Failing to Stack Blocks

Baxter uses a keyboard (badly)

Baxter gets itself stuck on obstacle (table for example)

Baxter Plays "Catch" with hard object (Arm goes to ceiling, arm goes msthrows etc...)

If throwing likely not feasible Baxter has trouble finding person's hand, potentially hits
person by accident

Human Doesn't Realize gripper is stuck on table

mpative Video of Baxter Failing)
High Severity

Baxter Knocking Over “Expensive” Equipment
Baxter gets stuck in loop, arm going crazy

Baxter Nearly Runs into Person At Desk

Baxter Pours “Hot” Coffee into a cup human is holding
Baxter drops something heavy handed to him by a person

Baxter Arm Movement Unresponsive to Joystick, Moves Erratically

Draft2

Low Risk (Baxter Performs Task)
Low Severity (Little Risk of Damage)

| | |
|--|--|
| No Human Interaction | 1. Bot is packaging some soft material such as stuffed animals. Possible failures include failing to place toys, getting jammed on the box/tipping it over, or just not being able to locate items |
| Uninvolved Human Bystander (Same as No Human But With Bystander) | 1. See B3 but human is working at own task or watching bot |
| Human Interacting With Robot | 1. Human is Handing Bot Items and pointing at where they should go. |
| Human Controlling Robot | 1. See B3 But from POV of human with a joystick |

Notes:

1. Another Robot maybe necessary for simulating "on board" interaction with the robot.
2. Perhaps a Turtlebot can be brought in for non-humanoid test.

ask Devoid of Expression or Erratic Behavior or Person Shown
Med Severity (possible inexpensive damage)

1. Bot is packaging some delicate but inexpensive material
such as

1. See C3 but humans is working on own task
nearby/watching bot

1. Human is handing Bot Glasses and Pointing Bot to one of
many boxes.

1. See C3 but from POV of human with a joystick

Preemptive video of Baxter Succeeding)
High Severity (Danger to Person or Costly Damage)

1. Bot is packaging costly items such as computer equipment, and pulling from far away from it.

1. Computers Bot is packaging are near human working at desk Bot comes dangerously close to hitting human

1. Human is handing Bot computers, and pointing to correct boxes

1. See D3 but from POV of human with a joystick

Draft2

Low Severity

Med Risk (Baxter Displays Some Caution and Erratic)
Med Severity

1. See B3 but with

c Behavior)
High Severity

Draft2

Hig

Low Severity

Draft2

h Risk (Baxter Displays Confusion and Highly Erratic Behavior or Person is Shown Pree
Med Severity

mptive Video of Baxter Failing)
High Severity