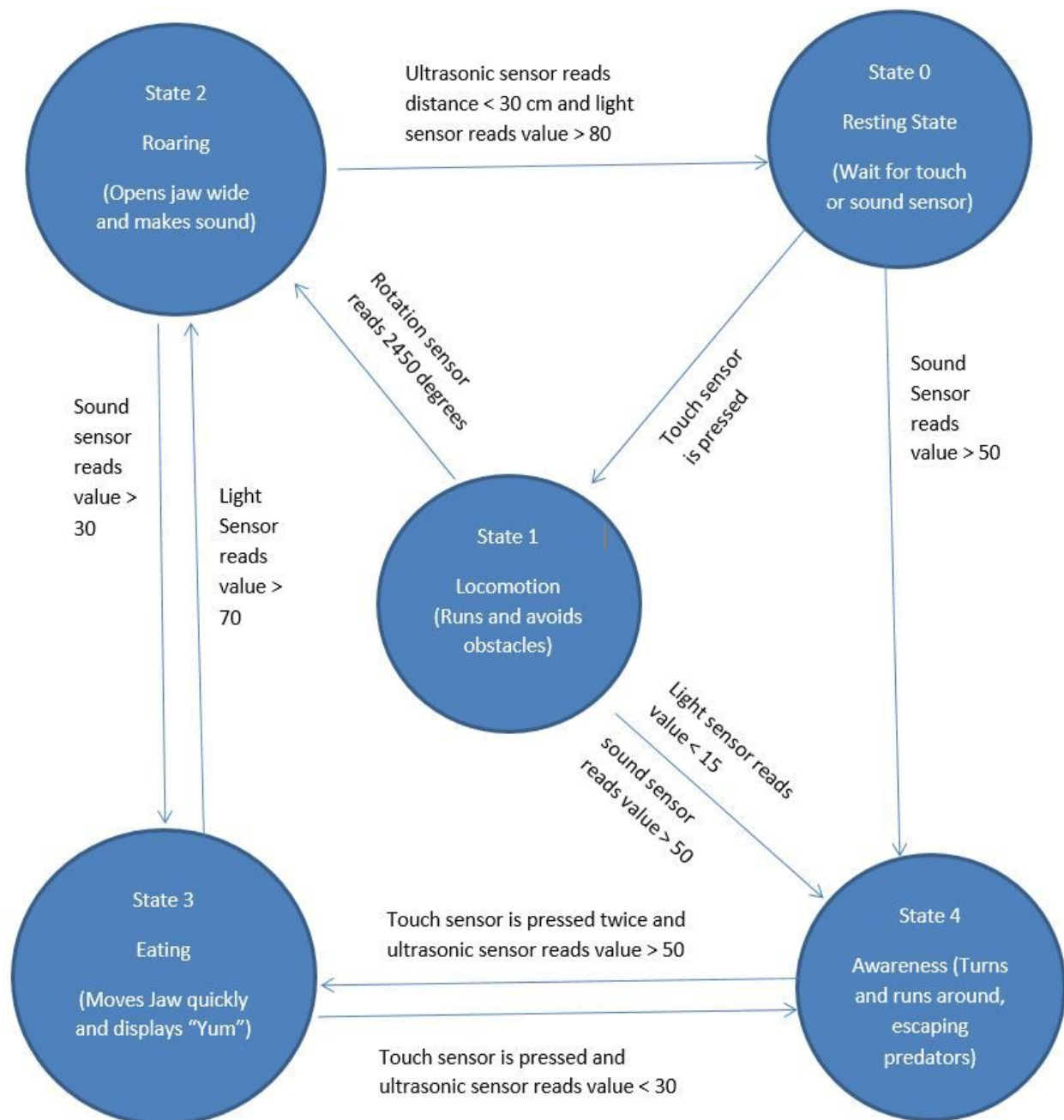


**To:** Dr. Svarovsky

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**Date:** December 8, 2015



**Figure 1. Final State Machine Diagram**

## Summary of State Machine Changes

Details of features that were changed

- no features were changed from the previous state machine diagram

Details of transitions that were changed

- The transition from State 1: Locomotion to State 2: Roaring was changed from "Ultrasonic sensor reads high value" to "Rotation sensor reads 2450 degrees."
- The transition "Light sensor reads value <15 and sound sensor reads value >50" was added from State 1: Locomotion to State 4: Awareness.
- In addition to the ultrasonic sensor reading a value <30 cm, the "light sensor will read a value >80" from State 2: Roaring to State 0: Resting State.
- The transition from State 3: Eating to State 2: Roaring was changed from "Sound sensor reads high value" to "Light sensor reads value >70."
- The transition "Touch sensor is pressed and ultrasonic sensor reads value <30" was added from State 3: Eating to State 4: Awareness.
- The transition from State 4: Awareness to State 3: Eating was changed from "Touch sensor is pressed" to "Touch sensor is pressed twice and ultrasonic sensor reads value >50."

**Table 1. Intended Transition Table**

Transition	Worked?
State 0: Resting → State 1: Locomotion	
State 1: Locomotion → State 2: Roaring	
State 2: Roaring → State 3: Eating	
State 3: Eating → State 4: Awareness	
State 4: Awareness → State 3: Eating	
State 3: Eating → State 2: Roaring	
State 2: Roaring → State 0: Resting	