

Project Proposal: Boo-Bot

Daniel Garcia and Devin Pohl

CS 370

2/25/2021

Project Objective

Members

Members of this project are as follows:

- Daniel Garcia
- Devin Pohl

Software Required

Overview

Justification

Hardware Required

Overview

Justification

Bill of Materials

Below is a bill of materials for this project, including all hardware used. All components are purchased from various EBay stores, with shipping times between one and three weeks.

Amount	Component	Price Ea (\$)	Description	Cost (\$)
2	Drivers	3.16	A4988 Stepper Motor Driver Module	6.33
2	Motors	3.98	MINEBEA NMB 2-phase 4-Wire 18° Stepper Motor	7.96
1	Amp	4.99	MAX98357A I2S Class D amplifier	4.99
1	Speaker	0.99	8 ohm speaker	0.99
1	Lipo	15.05	Lipo battery pack	15.05
1	Microphone	7.51	I2S MEMS Microphone SPH0645LM4H	7.51
1	Voltage Regulator	0.79	3-24V to 12V 2A Adjustable Boost Step-Up Converter	0.79
10	Capacitors	0.466	16v 1000UF Electrolytic SMD	4.66
1	Raspberry pi	29.99	Raspberry Pi 3 Model A+ 2018 model	29.99
1	9-axis MPU	4.60	MPU9250 (Gyro, Accelerometer, Compass)	4.60
1	ADC	1.69	INA219 DC current and voltage sensor	1.69
			Total:	84.56