User Manual F.I.N.N. the Robot Butler

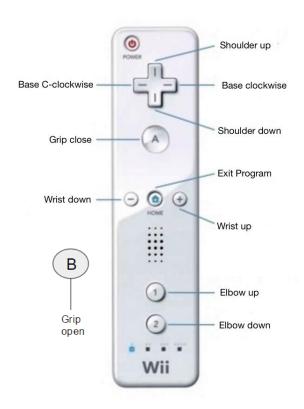
F.I.N.N. the Robot Butler is a robotic arm and chassis that work in unison using a small computer called a Raspberry Pi. Both the arm and the chassis were coded in the Python language and can be used simultaneously via a Wii Remote and Nunchuck.

The robotic arm is controlled by the Wii Remote and the chassis is controlled by the Nunchuck. This allows both the arm and the chassis to be used simultaneously with full functionality of both.

To connect the Wii Remote to the Raspberry Pi via Bluetooth, press the 1 and 2 buttons on the Wii Remote at the same time. If the connection is successful, the Wii Remote will vibrate for five seconds and the flashlight on the robotic arm will flash five times.

The following is a list of which buttons on the Wii Remote correlate to which parts of the robotic arm:

| <u>Button</u> | <u>Function</u> |
|---------------|------------------------------|
| Up (D-Pad) | Shoulder Up |
| Down (D-Pad) | Shoulder Down |
| Left (D-Pad) | Rotate Base Counterclockwise |
| Right (D-Pad) | Rotate Base Clockwise |
| Α | Grip Close |
| В | Grip Open |
| Plus (+) | Wrist Up |
| Minus (-) | Wrist Down |
| 1 | Elbow Up |
| 2 | Elbow Down |
| Home | Exit Program |



The following is a list of which buttons and controls on the Wii Remote's Nunchuck correlate to which parts of the chassis:

| <u>Button</u> | <u>Function</u> |
|---------------------|---------------------------------|
| Directional Control | Chassis Moves in That Direction |
| С | Slows Chassis Movement |
| Z | Speeds Chassis Movement |



F.I.N.N. runs on 10 AA batteries, all of which are rechargeable, and 4 D batteries. The 10 AA batteries power the Raspberry Pi and the chassis while the 4 D batteries externally power the robotic arm. 2 AA batteries are required to power the Wii Remote, which are also rechargeable.