**Keyboard Gloves Layout**

**Overview:**

The inputs from each hand will be represented by a string of 5 characters from {0, 1}, where 0 represents finger extension and 1 represents finger flexion. The positions of these characters are associated with the location of the fingers on each hand when in a typing position like that of a traditional keyboard. The inputs from the left hand are used to determine the set of characters used, and the right-hand inputs are used to select which key to output. Additionally, the left-hand thumb will be used as a modifier key to specify capitalized letters and alternate punctuation and the right-hand thumb will be associated with the space and backspace key depending on the position of the left-hand thumb. Also note that the keybinds took inspiration from on a traditional qwerty keyboard layout to help the user have an easy transition from a qwerty keyboard to using the Keyboard Gloves. A value of 1 for the left hand pinky represents the left side of the keyboard and a value of 1 for the left hand index finger represents the right side of the keyboard, with the 3rd and 4th fingers specifying the row of keys that the user wants to type from.

Example:

00010 00010

This string of characters will result from bending the left-hand index finger and the right-hand ring finger, with all other fingers extended and will type the character “o” being typed.

**Keybinds:**

|  |  |  |
| --- | --- | --- |
| **Left Hand Input** | **Right Hand Input** | **Output** |
| xxxx0 | 10000 | space |
| xxxx1 | 10000 | backspace |
|  |  |  |
| 00100 | 01000 | ‘ |
| 00100 | 00100 | , |
| 00100 | 00010 | . |
| 00100 | 00001 | enter |
|  |  |  |
| 00101 | 01000 | “ |
| 00101 | 00100 | ( |
| 00101 | 00010 | ) |
| 00101 | 00001 | : |
|  |  |  |
| 10000 | 01000 | q |
| 10000 | 00100 | w |
| 10000 | 00010 | e |
| 10000 | 00001 | r |
|  |  |  |
| 11000 | 01000 | a |
| 11000 | 00100 | s |
| 11000 | 00010 | d |
| 11000 | 00001 | f |
|  |  |  |
| 11100 | 01000 | z |
| 11100 | 00100 | x |
| 11100 | 00010 | c |
| 11100 | 00001 | v |
|  |  |  |
| 00010 | 01000 | u |
| 00010 | 00100 | i |
| 00010 | 00010 | o |
| 00010 | 00001 | p |
|  |  |  |
| 00110 | 01000 | j |
| 00110 | 00100 | k |
| 00110 | 00010 | l |
| 00110 | 00001 | ; |
|  |  |  |
| 01110 | 01000 | b |
| 01110 | 00100 | n |
| 01110 | 00010 | m |
| 01110 | 00001 | / |
|  |  |  |
| 01100 | 01000 | t |
| 01100 | 00100 | g |
| 01100 | 00010 | y |
| 01100 | 00001 | h |
|  |  |  |
| 10001 | 01000 | Q |
| 10001 | 00100 | W |
| 10001 | 00010 | E |
| 10001 | 00001 | R |
|  |  |  |
| 11001 | 01000 | A |
| 11001 | 00100 | S |
| 11001 | 00010 | D |
| 11001 | 00001 | F |
|  |  |  |
| 11101 | 01000 | Z |
| 11101 | 00100 | X |
| 11101 | 00010 | C |
| 11101 | 00001 | V |
|  |  |  |
| 00011 | 01000 | U |
| 00011 | 00100 | I |
| 00011 | 00010 | O |
| 00011 | 00001 | P |
|  |  |  |
| 00111 | 01000 | J |
| 00111 | 00100 | K |
| 00111 | 00010 | L |
| 00111 | 00001 | ! |
|  |  |  |
| 01111 | 01000 | B |
| 01111 | 00100 | N |
| 01111 | 00010 | M |
| 01111 | 00001 | ? |
|  |  |  |
| 01101 | 01000 | T |
| 01101 | 00100 | G |
| 01101 | 00010 | Y |
| 01101 | 00001 | H |
|  |  |  |
| 01000 | 01000 | 0 |
| 01000 | 00100 | 1 |
| 01000 | 00010 | - |
| 01000 | 00001 | + |
|  |  |  |
| 10010 | 01000 | 2 |
| 10010 | 00100 | 3 |
| 10010 | 00010 | 4 |
| 10010 | 00001 | 5 |
|  |  |  |
| 10011 | 01000 | 6 |
| 10011 | 00100 | 7 |
| 10011 | 00010 | 8 |
| 10011 | 00001 | 9 |