**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.

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.

**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 |