

FaceTrack Tilt Keys

Tyler Lux

relativelux@gmail.com

Facetrack Tilt Keys allows your head to become a small programmable keyboard for up to two unique keys. This software was developed with the help of OpenCV.org. This software requires a webcam. Not all webcams are compatible with OpenCV.

[Demo Video](#)

How to use:

Settings > Edit General Settings opens the main General Settings window. The user can select a wide variety of keystrokes. The simple default settings are shown in the image below. The full keystroke list can be easily found [online](#), at the bottom of this read me and in the included KEYCODES.csv file. Please note that codes are not case sensitive and they do not require the 'VK_' that precedes each one. For the Tab key, 'VK_TAB' and 'tab' are both acceptable entries. The user can save their personal settings and the program will load them automatically the next time the program starts. Settings are saved in **MyDocuments\FaceTrackTK\USERSETTINGS.dat**

General Settings

| Left Key: | | Right Key: | |
|--|---|--|---|
| Order: 1 | <input type="text" value="Q"/> | Order: 1 | <input type="text" value="E"/> |
| 2 | <input type="text" value="(OPTIONAL)"/> | 2 | <input type="text" value="(OPTIONAL)"/> |
| 3 | <input type="text" value="(OPTIONAL)"/> | 3 | <input type="text" value="(OPTIONAL)"/> |
| 4 | <input type="text" value="(OPTIONAL)"/> | 4 | <input type="text" value="(OPTIONAL)"/> |
| <input type="checkbox"/> Toggle Back On Recenter | | <input type="checkbox"/> Toggle Back On Recenter | |
| Engage At: <input type="text" value="10"/> Degrees from center (0-90) | | Engage At: <input type="text" value="10"/> Degrees from center (0-90) | |
| <input type="button" value="OK"/> | | <input type="button" value="Cancel"/> | |

The user can have combinations of keys like Control+Z and Shift+Q for uppercase letters. Be sure the order is correct. For uppercase letters have 'shift' first and the letter in the second entry.

The "Toggle back on recenter" option hits the keystroke a second time when the user returns their head to the center position.

The 'engage at' setting sets the degree value for when the simulated keystroke is pressed. The degree value is the number of degrees from the vertical.

Left Key:

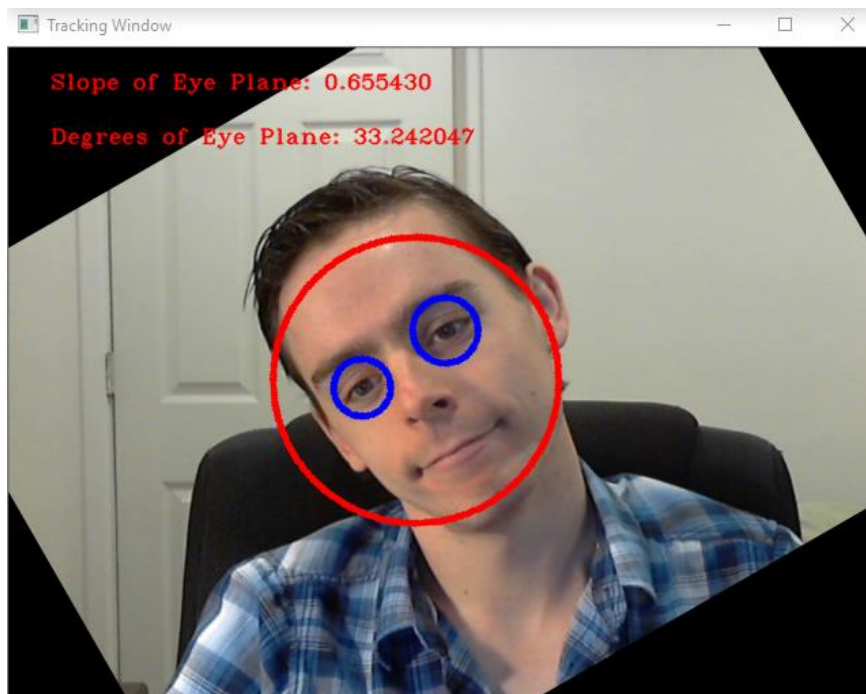
Order: 1

2

3

4

Some useful applications are demonstrated in the linked demo video at the top. Which demonstrates tilting in FPS games, using head tilting to change music tracks and volume. It can also be used to go forward and backwards in a browser window. Just about any key can be linked.



Available Keycodes:

| Key Codes | Description |
|-------------|--|
| VK_LBUTTON | Left mouse button |
| VK_RBUTTON | Right mouse button |
| VK_CANCEL | Control-break processing |
| VK_MBUTTON | Middle mouse button (three-button mouse) |
| VK_XBUTTON1 | Windowsÿ2000:ÿX1 mouse button |
| VK_XBUTTON2 | Windowsÿ2000:ÿX2 mouse button |

| | |
|---------------|--|
| VK_BACK | BACKSPACE key |
| VK_TAB | TAB key |
| VK_CLEAR | CLEAR key |
| VK_RETURN | ENTER key |
| VK_SHIFT | SHIFT key |
| VK_CONTROL | CTRL key |
| VK_MENU | ALT key |
| VK_PAUSE | PAUSE key |
| VK_CAPITAL | CAPS LOCK key |
| VK_KANA | IME Kana mode |
| VK_HANGUEL | IME Hanguel mode (maintained for compatibility; use VK_HANGUL) |
| VK_HANGUL | IME Hangul mode |
| VK_JUNJA | IME Junja mode |
| VK_FINAL | IME final mode |
| VK_HANJA | IME Hanja mode |
| VK_KANJI | IME Kanji mode |
| VK_ESCAPE | ESC key |
| VK_CONVERT | IME convert |
| VK_NONCONVERT | IME nonconvert |
| VK_ACCEPT | IME accept |
| VK_MODECHANGE | IME mode change request |
| VK_SPACE | SPACEBAR |
| VK_PRIOR | PAGE UP key |
| VK_NEXT | PAGE DOWN key |
| VK_END | END key |
| VK_HOME | HOME key |
| VK_LEFT | LEFT ARROW key |
| VK_UP | UP ARROW key |
| VK_RIGHT | RIGHT ARROW key |
| VK_DOWN | DOWN ARROW key |
| VK_SELECT | SELECT key |
| VK_PRINT | PRINT key |
| VK_EXECUTE | EXECUTE key |
| VK_SNAPSHOT | PRINT SCREEN key |
| VK_INSERT | INS key |
| VK_DELETE | DEL key |
| VK_HELP | HELP key |
| '0' | 0 key |
| '1' | 1 key |
| '2' | 2 key |
| '3' | 3 key |

| | |
|------------|--|
| '4' | 4 key |
| '5' | 5 key |
| '6' | 6 key |
| '7' | 7 key |
| '8' | 8 key |
| '9' | 9 key |
| 'A' | A key |
| 'B' | B key |
| 'C' | C key |
| 'D' | D key |
| 'E' | E key |
| 'F' | F key |
| 'G' | G key |
| 'H' | H key |
| 'I' | I key |
| 'J' | J key |
| 'K' | K key |
| 'L' | L key |
| 'M' | M key |
| 'N' | N key |
| 'O' | O key |
| 'P' | P key |
| 'Q' | Q key |
| 'R' | R key |
| 'S' | S key |
| 'T' | T key |
| 'U' | U key |
| 'V' | V key |
| 'W' | W key |
| 'X' | X key |
| 'Y' | Y key |
| 'Z' | Z key |
| VK_LWIN | Left Windows key (Microsoft Natural Keyboard) |
| VK_RWIN | Right Windows key (Microsoft Natural Keyboard) |
| VK_APPS | Applications key (Microsoft Natural Keyboard) |
| VK_SLEEP | Computer Sleep key |
| VK_NUMPAD0 | Numeric keypad 0 key |
| VK_NUMPAD1 | Numeric keypad 1 key |
| VK_NUMPAD2 | Numeric keypad 2 key |
| VK_NUMPAD3 | Numeric keypad 3 key |
| VK_NUMPAD4 | Numeric keypad 4 key |

| | |
|--------------|----------------------|
| VK_NUMPAD5 | Numeric keypad 5 key |
| VK_NUMPAD6 | Numeric keypad 6 key |
| VK_NUMPAD7 | Numeric keypad 7 key |
| VK_NUMPAD8 | Numeric keypad 8 key |
| VK_NUMPAD9 | Numeric keypad 9 key |
| VK_MULTIPLY | Multiply key |
| VK_ADD | Add key |
| VK_SEPARATOR | Separator key |
| VK_SUBTRACT | Subtract key |
| VK_DECIMAL | Decimal key |
| VK_DIVIDE | Divide key |
| VK_F1 | F1 key |
| VK_F2 | F2 key |
| VK_F3 | F3 key |
| VK_F4 | F4 key |
| VK_F5 | F5 key |
| VK_F6 | F6 key |
| VK_F7 | F7 key |
| VK_F8 | F8 key |
| VK_F9 | F9 key |
| VK_F10 | F10 key |
| VK_F11 | F11 key |
| VK_F12 | F12 key |
| VK_F13 | F13 key |
| VK_F14 | F14 key |
| VK_F15 | F15 key |
| VK_F16 | F16 key |
| VK_F17 | F17 key |
| VK_F18 | F18 key |
| VK_F19 | F19 key |
| VK_F20 | F20 key |
| VK_F21 | F21 key |
| VK_F22 | F22 key |
| VK_F23 | F23 key |
| VK_F24 | F24 key |
| VK_NUMLOCK | NUM LOCK key |
| VK_SCROLL | SCROLL LOCK key |
| VK_LSHIFT | Left SHIFT key |
| VK_RSHIFT | Right SHIFT key |
| VK_LCONTROL | Left CONTROL key |
| VK_RCONTROL | Right CONTROL key |

| | |
|------------------------|---|
| VK_LMENU | Left MENU key |
| VK_RMENU | Right MENU key |
| VK_BROWSER_BACK | Windowsÿ2000:ÿBrowser Back key |
| VK_BROWSER_FORWARD | Windowsÿ2000:ÿBrowser Forward key |
| VK_BROWSER_REFRESH | Windowsÿ2000:ÿBrowser Refresh key |
| VK_BROWSER_STOP | Windowsÿ2000:ÿBrowser Stop key |
| VK_BROWSER_SEARCH | Windowsÿ2000:ÿBrowser Search key |
| VK_BROWSER_FAVORITES | Windowsÿ2000:ÿBrowser Favorites key |
| VK_BROWSER_HOME | Windowsÿ2000:ÿBrowser Launch and Home key |
| VK_VOLUME_MUTE | Windowsÿ2000:ÿVolume Mute key |
| VK_VOLUME_DOWN | Windowsÿ2000:ÿVolume Down key |
| VK_VOLUME_UP | Windowsÿ2000:ÿVolume Up key |
| VK_MEDIA_NEXT_TRACK | Windowsÿ2000:ÿNext Track key |
| VK_MEDIA_PREV_TRACK | Windowsÿ2000:ÿPrevious Track key |
| VK_MEDIA_STOP | Windowsÿ2000:ÿStop Media key |
| VK_MEDIA_PLAY_PAUSE | Windowsÿ2000:ÿPlay/Pause Media key |
| VK_LAUNCH_MAIL | Windowsÿ2000:ÿLaunch Mail key |
| VK_LAUNCH_MEDIA_SELECT | Windowsÿ2000:ÿSelect Media key |
| VK_LAUNCH_APP1 | Windowsÿ2000:ÿLaunch Application 1 key |
| VK_LAUNCH_APP2 | Windowsÿ2000:ÿLaunch Application 2 key |
| VK_OEM_1 | Windowsÿ2000:ÿfor the US standard keyboard, the ';' key |
| VK_OEM_PLUS | Windowsÿ2000:ÿfor any country/region, the '+' key |
| VK_OEM_COMMA | Windowsÿ2000:ÿfor any country/region, the ',' key |
| VK_OEM_MINUS | Windowsÿ2000:ÿfor any country/region, the '-' key |
| VK_OEM_PERIOD | Windowsÿ2000:ÿfor any country/region, the '.' key |
| VK_OEM_2 | Windowsÿ2000:ÿfor the US standard keyboard, the '/' key |
| VK_OEM_3 | Windowsÿ2000:ÿfor the US standard keyboard, the '~' key |
| VK_OEM_4 | Windowsÿ2000:ÿfor the US standard keyboard, the '[' key |
| VK_OEM_5 | Windowsÿ2000:ÿfor the US standard keyboard, the '\ ' key |
| VK_OEM_6 | Windowsÿ2000:ÿfor the US standard keyboard, the ']' key |
| VK_OEM_7 | Windowsÿ2000:ÿfor the US standard keyboard, the 'single-quote/double-quote' key |
| VK_OEM_8 | |
| VK_OEM_102 | Windowsÿ2000:ÿeither the '<>' key or the '\ ' key on the RT 102-key keyboard |
| VK_PROCESSKEY | Windows 95, Windows NT 4.0, and Windowsÿ2000:ÿIME PROCESS key |
| VK_PACKET | Windowsÿ2000:ÿUsed to pass Unicode characters as if they were keystrokes. |

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|--------------|--|
| | The VK_PACKET key is the low word of a 32-bit Virtual Key value used for non-keyboard input methods. The Unicode character is the high word. |
| VK_ATTN | Attn key |
| VK_CRSEL | CrSel key |
| VK_EXSEL | ExSel key |
| VK_EREOF | Erase EOF key |
| VK_PLAY | Play key |
| VK_ZOOM | Zoom key |
| VK_NONAME | Reserved for future use |
| VK_PA1 | PA1 key |
| VK_OEM_CLEAR | Clear key |