

Vibrating pillow based on crypto price movement

API: <https://bybit-exchange.github.io/docs/inverse/#t-introduction>

Triggers that would make the pillow vibrate:

- Price spike or plunge by more than 3% in the last 5 mins
- Price spike or plunge by more than 5% in the last 1 hour

All cryptocurrency will be paired with USDT (example: BTCUSDT, ETHUSDT)

The hardware consist of:

ESP32

4x DC 3.7V 12mm Coin Flat Vibrating Micro Motor

3x AA battery

Piezo buzzer

3 position switch

The pillow will have two modes

- Configuration
- Monitoring

The user will be able to switch the modes with the switch

Position 1 - OFF

Position 2 - Monitoring

Position 3 - Configuration

The buzzer will beep when it enters:

Monitoring - once

Configuration - twice

How it works:

User will have to switch on the pillow to configuration mode

User will connect to the ESP32 wifi with ssid as "Moon Pillow" using QR code

Once connected, user will be brought to the set up page (wireframes)

In the set up page:

- Test vibration
- select their crypto
- select their triggers
- done
- Switch to monitoring mode (ssid will be hidden)

In configuration mode:

When there is successful wifi connection, buzzer beep once (0.5s)

If unsuccessful the buzzer will beep for 1s and stop for 1s (repeat)

Every minute:

- Wakes up and connects to the Wifi
- Call an API on the server to check if it needs to trigger "Vibration"
- Goes back to "sleep" to save power

In configuration mode:

When there is successful wifi connection, buzzer beep once (0.5s)

If unsuccessful the buzzer will beep for 1s and stop for 1s (repeat)

To edit the crypto pairs, user will have to switch back to configuration mode and connect to the "moon pillow"

Wireframes:

<https://www.figma.com/file/cZx9bmGetc5bkwNPc3nsPw/Bybit?node-id=296%3A1814>