# Tohoku Univ. Technology

# Treatment programs for people with bipolar disorder

# Predicts manic or depressive states and assists to prevent relapses

## Overview

In the treatment of bipolar disorder, which is characterized by recurrent manic and depressive episodes, it is essential for the affected person to be aware of the ups and downs of their mood and to maintain their regular lifestyle. Monitoring mood states by patients and clinicians is essential for preventing and timely intervention of relapses. However, differentiating mild hypomanic episodes from normal mood variations remains challenging for both patients and clinicians. Especially recognition of hypomanic status is difficult for patients. In addition, clinicians see outpatients once a couple of weeks or months in regular clinical settings and, therefore, may potentially look over patients' mood swings during the intervals. This invention is a program consisting of machine learning algorithms integrated into a smartphone application for evaluating the affected person's current mood and mood within a few weeks based on objective information, such as body motion, heart rate variability, and voice collected through a wearable device and the application. The present invention enables accurate evaluation and prediction of the mood while reducing the burden on the affected person. It enables the maintenance of appropriate treatment of bipolar disorder and the prevention of relapses.

# **Product Application**

- Treatment programs for people with bipolar disorder
- Health app

#### **IP** Data

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Since this patent has not been disclosed, disclosure of the specification will be possible after the conclusion of the intellectual property agreement.

# System for evaluating and predicting mood state



### **Related Works**

#### Contact

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