

## Title

# AI in Action: Pioneering an Algorithm for Smoke-Free Living through Wearable Tech

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## Abstract

The global prevalence of smoking is alarmingly high, despite the known health risks. Emerging mHealth technologies, including smartphone applications and wearable devices, offer promising solutions to aid smoking cessation. Our study leverages these technologies, specifically using five Embrace Plus clinical wearables, akin to smartwatches, to analyze the movements of 50 diverse participants. The aim is to identify movements associated with smoking behaviors, while disregarding unrelated actions. Participants will perform a series of daily activities, including smoking a traditional or electronic cigarette at standard intervals. The data collected will be used to develop an intelligent algorithm capable of discerning smoking-related movements. Literature and our extensive experience suggest that reminders can be beneficial for those struggling to quit smoking. These reminders serve as alarms during the enactment of the smoking automatism, bringing the action into conscious awareness. Our ultimate goal is to patent an algorithm that can be installed on various wearables (both commercial and clinical), effectively aiding in smoking cessation. This study represents a significant stride in utilizing mHealth technologies to combat global smoking prevalence.