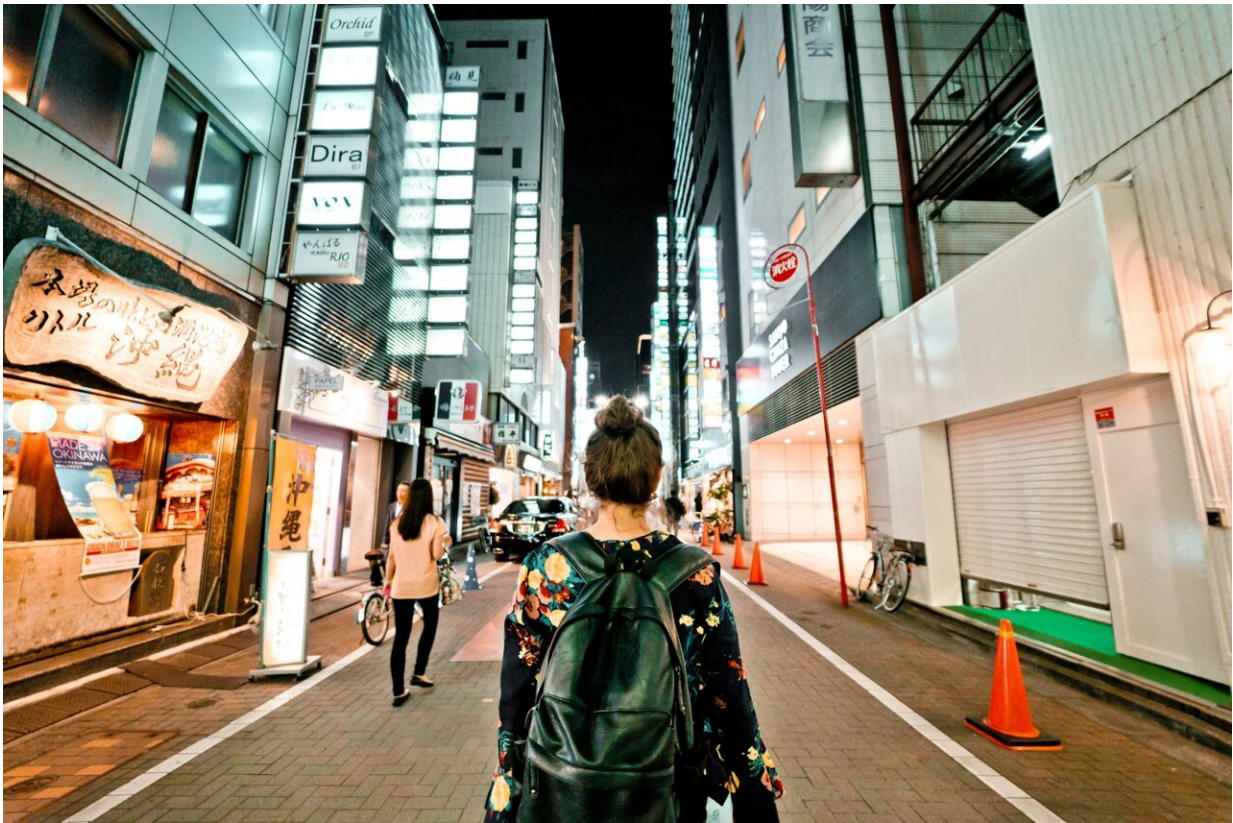# New app revolutionizes safety for women walking alone

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Credit: Unsplash/CC0 Public Domain

Two University of Bath graduates have launched their revolutionary women's safety smartwatch app, Epowar, that monitors heart rate and body motion to sense distress and automatically sends an emergency

alert if the wearer is attacked.

The Epowar app, aimed primarily at women's safety, eliminates the major issue with conventional rape alarms and personal safety products: they need to be physically activated, which is often not an option in a violent assault.

The innovative smartwatch app uses AI to respond immediately if a user is attacked when walking or running alone. The app detects distress, sends an alert to the wearer's contacts and automatically records and stores evidence, including microphone data, GPS, vital signs and movement in a cloud system.

The app became available on the UK App Store on June 1 and will be rolled out to other devices, such as Fitbit, Android and Garmin, later this year.

"We are so excited that after three years of continual research, painstaking experiments and trials, we can finally launch the Epowar app. We believe it will make a major contribution to women's safety. The key is that it all happens automatically—an assailant would have little or no time to prevent this, which is not always possible with conventional panic buttons, rape alarms or your mobile phone," Epowar co-founder E-J Roodt says.

"Many women feel scared to walk or run alone—we're afraid of becoming a victim of violence. Technology alone cannot make women safer on our streets, but tech like Epowar can play its part, giving women back some power and control," Roodt says.

Inspiration for the app came to Roodt, a BSc Business graduate of the University's School of Management, while jogging in a badly lit park and worrying about the risk of an attack.

Roodt, a keen smartwatch user, was aware of the advances in wearable technology and how it was being used to detect heart attacks. She wondered if those concepts could be applied to women's safety and took her ideas to Maks Rahman, an engineering student. Together, they co-founded Epowar.

They started building Epowar while studying, supported by the University's Enterprise and Entrepreneurship program, which included funding and a business mentor. They have continued its development full-time since graduating—Roodt in 2022, Rahman a year earlier.

The AI-powered system was built on extensive research into detectable responses to physical distress and an analysis of thousands of samples of physiological and motion data. The AI models can distinguish incidents of distress from regular activities and exercises, such as walking.

Rahman said the team was keen to avoid the privacy issues that have clouded other security apps, which may include tracking the user.

Epowar's software does not track or identify the wearer, up to the point where an alert is issued. Currently, users must switch on the app for specific journeys where they feel there is potential risk but, in future, users will be able to run the app permanently. The data collected is used to fine-tune the app, and is completely anonymized.

"I'm used to walking my female friends home whenever it's late or they feel unsafe. I have two younger sisters, I wondered what it would be like for them and if someone would do the same. I hope they use Epowar to be safe and also independent," Rahman says.

Provided by University of Bath