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SMART BALLET SHOES LET DANCERS TRACK THEIR PERFORMANCE



WORK & LIFESTYLE

E-TRACES is a set of shoes and an app that tracks ballet dancers' movements and pressure to create a graphical recording of their dancing.

Wearable sensors are already helping athletes to quantify their performance — take [Zepp](#) for example, which has already created technology that analyzes the swing of tennis and golf players to help them perfect their technique. Now a project called [E-TRACES](#) wants to do the same for ballet performers, with a set of shoes and an app that tracks their movements and pressure to create a graphical recording of their dancing.

Created by Lesia Trubat, a design student at Pompeu Fabra University in Barcelona, the project involved the creation of a pair of Pointe ballet shoes that were modified with LilyPad Arduino technology. The shoes feature sensors on the bottom that can record the pressure and movement of the dancer's feet and send the data to a mobile device. Through the companion E-TRACES app, dancers can then watch back a visual animation of their performance, depicted as a line traveling through space. The data can be used to make sure that they've performed the moves correctly, check if a routine is varied and interesting, or overlay multiple performances to check they've mastered a particular dance.

Watch the following video to see the technology in action:

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E-TRACES was presented as Trubat's final project for her degree, and although there's no plans to bring the product to market, the student says that the idea could be adapted for other types of dance. With the number of advanced sports analysis equipment now on the market, could this concept be improved upon to deliver detailed performance feedback to dancers?

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