

No Face-Touch: an Open Project to Limit the COVID-19 Outbreak

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MOTIVATION

The alarming morbidity of COVID-19 has drawn the attention on the social role of hygiene rules, with a particular focus on the importance of limiting face-touch occurrences. The face-touch action is very often performed involuntarily and occurs with little apparent control or awareness several times per hours.

GOAL

To develop a ready-to-use and large-scale deployable solution in charge of estimating hand proximity to face and notifying the user whenever a face-touch movement is detected.

The system is composed of three elements:

- a smartwatch/smartphone/DIY electronic worn by the user;
- an application/an equivalent software embedded in the electronic bracelet;
- a wearable accessory worn close to the face (like a necklace, a pair of earrings or glasses) embedding magnets to generate a detectable magnetic field.

While the first two elements are essential for the system functioning, a configuration without the third element has been proposed and evaluated. Although the use for the COVID-19 emergency nowadays is the most urgent application, the same solution can be employed also in ordinary daily life as a simple tool to discourage face-touching, to decrease probability to get infections from the environment, to avoid unsafe zones or to keep distance from dangerous objects.

DELIVERABLES

- **Month 5:** GitHub repository containing a preliminary version of a Kotlin implementation for WearOs devices (smartwatches) and for Android devices (smartphones).
- **Month 8:** Final version of the Kotlin implementation for WearOs devices (smartwatches) and for Android devices (smartphones), and an Arduino library for supporting the development electronic bracelet.

