Title: Enhancing Affective Touch Communication in Text Messaging

Context:
Face-to-face, physical communications benefit from the rich, dynamic non-verbal cues that can be naturally expressed and interpreted, such as facial expressions or touch (e.g., a pat on the back, holding hand, etc.). In text-based communication, users often use emojis to express facial emotion (e.g., 😏 for smirking) or hand gestures (e.g., 🤗 for hugs). However, the output channel is mainly visual, while overlooking the importance of touch that can express emotional attachment or communicate physical connections. The goal of this project is to design and implement a novel interactive system around enhancing affective touch communication in text messaging. In the first phase “Ideate”, the students will then design an interactive touch-based communication on mobile devices. In the second phase “Prototype”, the students will build the interactive system in a form of a demo application (e.g., a chat app) that captures the touch input from the mobile devices and generates touch output (note: The students can use existing hardware prototypes in our lab as the output channel, such as a tactile sleeve. Building a new one is optional.) This project is an opportunity to learn about mobile development with tangible output.

Supervisor: Eric Lecolinet and Jessalyn Alvina (with a possibility of co-working with other team members on related projects).

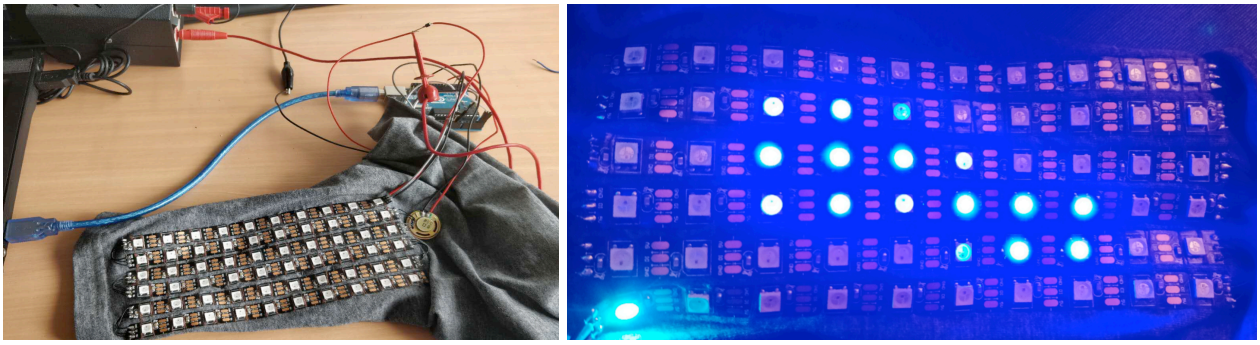

Figure 1: An example of an existing hardware prototype available in our lab. It is a tactile sleeve with vibration motors and LED display.

References:

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2. Jessalyn Alvina, Chengcheng Qu, Joanna McGrenere, and Wendy E. Mackay. 2019. MojiBoard: Generating Parametric Emojis with Gesture Keyboards. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA ’19). Association for Computing Machinery, New York, NY, USA, Paper LBW0218, 1–6. DOI:https://doi.org/10.1145/3290607.3312771
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