KeMotions: Keys to Emotional Cues, Year Two

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When typing on a keyboard, we typically only see the end result of neatly typed words. However, the process of typing in order to create those final words also takes into account timing (such as the speed of pressing keys, or the pauses between words as you think about the right term to use). The purpose of this project is to understand how the process of typing on a keyboard reveals information about the inner emotional state of the individual who is typing. By studying this typing process, we will be able to move towards more intelligent and responsive computer systems, which can understand not just what we say (type), but also how we say (type) it. It was hypothesized that if an individual's wording and typing pattern on a computer keyboard is observed and analyzed, then it will be possible to predict the relative emotional state and engagement of that individual. Overall, the results from this study support the hypothesis and it was found that there are multiple statistically significant differences in the typing patterns of a response in relation to a subject's sentiment towards the topic. From creating computers that will one day be able to identify things like early signs of depression and gradual cognitive decline to monitoring student engagement during essays, the applicability of the findings from this study are extremely far-reaching. The project also sets the foundation for measuring whether an individual is becoming more committed to a particular position they have taken and potentially even predicting if that commitment is going to lead to action on their part – this would be extremely useful in predicting whether someone is a potential threat to society based on what they are posting in social media and online.

Awards Won:
Third Award of $1,000