TITLE OF THE PROJECT: Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM) based Application Programming Interface (API) to predict Emotion over web

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**ABSTRACT**

Emotion Detection from facial expressions using AI can be a viable alternative to automatically measure consumer’s engagement with their content and brands. Machine emotional intelligence is a burgeoning frontier that could have huge consequences in not only advertising, but in new startups, healthcare, wearables, education, and more. Human emotion plays an important role in the interpersonal relationship. Automatic recognition of emotion has been an active research topic from early eras and Efficiency has been a challenge. In this project we build an***Application Programming Interface (API)* *to predict facial Expression* powered by Amazon *EC2 Linux instances.* Algorithms and models like Long Short-Term Memory *(LSTM) and* Convolutional Neural Networks *(CNN)***are used for training and performance evaluation. The potential application of this Application includes Facial Expression based feedback in OTG platform's, Facial Expression detection in online interviews, Facial Expression Recognition for Security, IoT Devices, Connected users and streaming Dashboards. Effectiveness of the API is measured through several defeats and experiments by backpropagation of errors. The main goal of this project is to produce an enhanced performance level with greater accuracy.