

Emotional Evaluation Through Facial Recognition

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What is Facial Expression Based Emotional Recognition?

It is software that can analyze a persons face and detect which emotion is being expressed. This software uses nodal points to map a picture of a face.

It then uses an algorithm to measure the distances between different points on the map to detect which emotion is expressed.

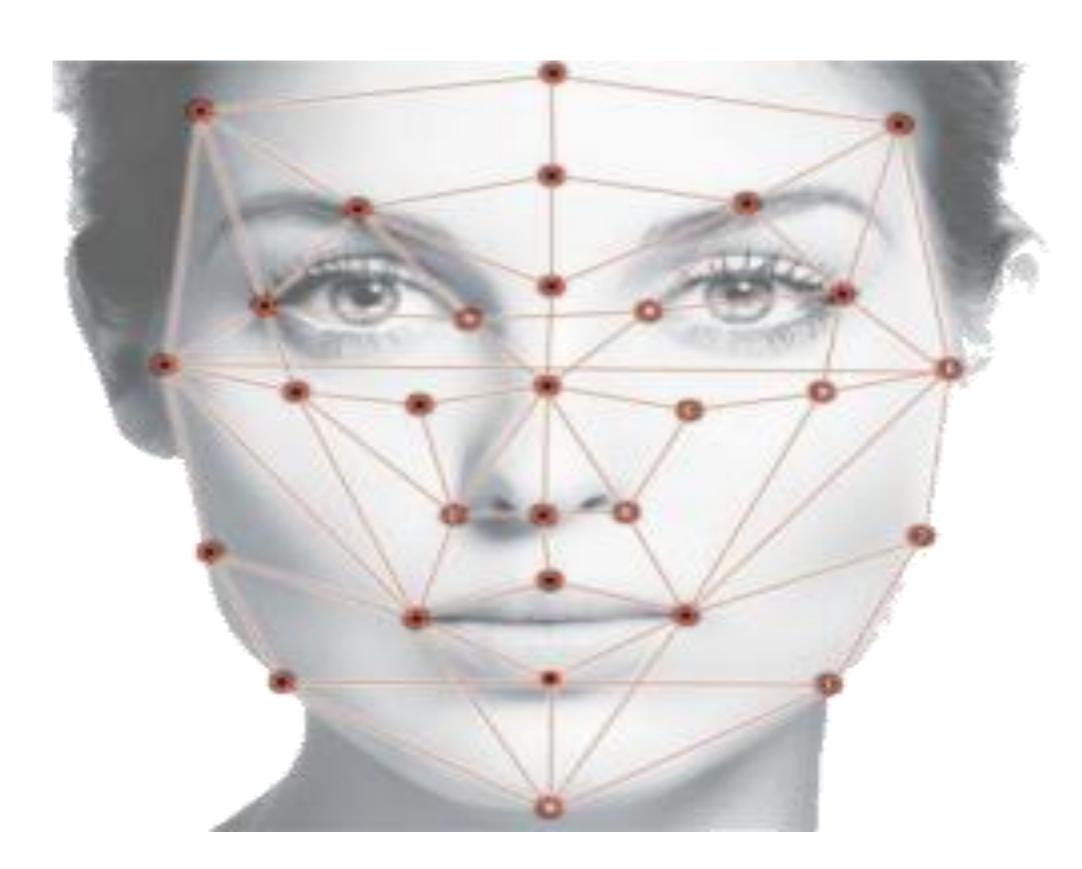
The software can detect all major emotions and combinations.

Facial Recognition System Vs Traditional Means for Surveying

- Facial recognition provides an accurate, quantitative representation of on-campus happiness
- Provides administrators with the <u>current</u>
 emotional state of its student body
 - O Corrections can be made in a timely manner
- Much more efficient and accurate than traditional campus climate surveys
 - Tradition survey information is slow, tedious, and inaccurate

EmoVu

EmoVu is the software program designed by Eyeris. EmoVu has been critically acclaimed by PBS, The Wall Street Journal, and Mashable. It can accurately predict a person's emotional state, in real time, by analyzing their facial expression.



Example of what the facial recognition software

Creating a System with EmoVu

Our project was to explore the feasibility and utility of developing an emotional facial recognition camera system for use at academic Institutions.

This system could provide administrators with an overall estimation of the general well being of students at these institutions.

Computer	\$500.00
Extra Storage	\$84.99
Weatherproof Camera	\$249.98
Software Engineer	\$803.70
Estimated Development Cost	\$1,638.67
IT Technician	\$385.25
Construction Laborer	\$113.92
Estimated Installation Cost	\$499.17
Monthly EmoVu Subscription	\$495.00
Total Estimated Cost	\$2,632.84
Remaining Grant Funds	\$7,367.16

Estimated Costs to develop and install such a system

References

Dupre, Damien, Daniel Akpan, Elena Elias, Jean-Michel Adam, Brigitte Meillon, Nicolas Bonnefond, Michel Dubois, and Anna Tcherkassof. "Oudjat: A Configurable and Usable Annotation Tool for the Study of Facial Expressions of Emotion." *International Journal of Human-Computer Studies* 83 (2015): 51-61. *ScienceDirect*. Web. 12 Mar. 2016.

Kim, Moon Hwan, Young Hoon Joo, and Jin Bae Park. *Motion Detection Algorithm Using Frontal Face Image*. Tech. no. ICCAS200. Gyeonggi-Do: KINTEX, 2005. Kunsan National University. Web. 13 Apr. 2016.

N.d. Facial Recognition And The World. Web. 13 Apr. 2016.