

# SFBU

# **Ο Ν Ν Ε C Τ Ι Ο Ν**

STUDENT SCHOLARSHIP & GRANT TESTIMONIALS

#### FOCUSING ON STUDENT SUCCESS

President Biden's student loan forgiveness plan good news for some, but San Francisco Bay University graduates don't have to worry.

> YOUR SMART DEVICE WILL FEEL YOUR PAIN & FEAR



## President Biden's student loan forgiveness plan good news for some, but San Francisco Bay University graduates don't have to worry

Why not? SFBU, based in Silicon Valley, gives out more scholarships than most institutions.

Many college graduates are looking forward to President Biden's student loan forgiveness plan, expected to go live this week. This forgiveness is intended to lessen the burden of their financial debt. But while the wait may be agonizing for some students, San Francisco Bay University students and graduates have a different outlook on the matter because few have to worry about college debt repayment at all. Not only does SFBU offer degree programs at exceptionally reasonable tuition rates, it also offers some form of scholarship or grant to 100% of its current applicants and students.



"Paul Choi, EVP and COO of SFBU, explains, "We are very proud to offer our students such great opportunities. Our scholarships and grants help reduce the overall cost of attendance, which is already reasonable, and allow our graduates to enter the workforce without the burden of college debt.

...We believe that our students should be able to focus on their careers and not worry about how they will repay tens of thousands of dollars in student loans. SFBU's careerfocused mentality is why we continue investing in scholarships, grants, and affordable tuition. Students shouldn't have to struggle to achieve a quality education."

While President Biden's college debt plan is important to many students with significant loan obligations, SFBU students are entering the workforce with a lighter financial burden.

# **STUDENT SCHOLARSHIP & GRANT**

## E S T I M O N I A L S



#### Maxat Kerimbayev

"I am both honored and humbled to receive such an amazing gift from San Francisco Bay University. Being a recipient of a presidential scholarship has strengthened my belief that I can make a difference in the world with hard work and effort. With your financial support, I plan on pursuing my dream career. Thank you again, SFBU, for the great support that you are giving to your students to achieve their goals."

> MSCS program President's Scholarship

#### Queena Look

"Studying in an MBA program has always been on my bucket list to kickstart my own business one day in the future. Coming from a Southeast Asian country, Malaysia, I am grateful for the Presidential & Housing Scholarship granted by SFBU, as it not only eases my financial burden, but also provides a step toward my dream. On top of that, the friendly campus surroundings and accommodating staff also smoothen the process of settling into the new environment quickly."

President's Scholarship & Housing Scholarship





### Julio Camacho

"I am honored to have received the President's Scholarship from San Francisco Bay University. I am convinced that SFBU's MBA program will foster my continued growth and exposure to new ideas. For this reason, the scholarship means immense support that will allow me to attain the knowledge and skills required to excel in my professional field."

MBA program President's Scholarship

# YOUR SMART DEVICE WILL FEEL YOUR PAIN & FEAR

#### Prof. Ahmed Banafa

What if your smart device could empathize with you? The evolving field known as affective computing is likely to make that happen soon. Scientists and engineers are developing systems and devices that can recognize, interpret, process, and simulate human affects, or emotions. It is an interdisciplinary field spanning computer science, psychology, and cognitive science. While its origins can be traced to longstanding philosophical enquiries into emotion, a 1995 paper on affective computing by Rosalind Picard catalyzed modern progress.

The more smart devices we have in our lives, the more we are going to want them to behave politely and be socially smart. We don't want them to bother us with unimportant information or overload us with too much information. That kind of common-sense reasoning requires an understanding of our emotional state. We're starting to see such systems perform specific, predefined functions, like changing in real time how you are presented with the questions in a quiz, or recommending a set of videos in an educational program to fit the changing mood of students.

#### A computer can observe innumerable variables that may indicate emotional reaction and variation.

How can we make a device that responds appropriately to your emotional state? Researchers are using sensors, microphones, and cameras combined with software logic. A device with the ability to detect and appropriately respond to a user's emotions and other stimuli could gather cues from a variety of sources. Facial expressions, posture, gestures, speech, the force or rhythm of key strokes, and the temperature changes of a hand on a mouse can all potentially signify emotional changes that can be detected and interpreted by a computer. A built-in camera, for example, may capture images of a user. Speech, gesture, and facial recognition technologies are being explored for affective computing applications.

With speech alone, a computer can observe innumerable variables that may indicate emotional reaction and variation. Among these are a person's rate of speaking, accent, pitch, pitch range, final lowering, stress frequency, breathiness, brilliance, loudness, and discontinuities in the pattern of pauses or pitch.

Gestures can also be used to detect emotional states, especially when used in conjunction with speech and facial recognition. Such gestures might include simple reflexive responses, such as lifting your shoulders when you don't know the answer to a question, or they could be complex and meaningful, as when communicating with sign language.

A third approach is the monitoring of physiological signs. These might include pulse and heart rate, or minute contractions of facial muscles. Blood volume can be monitored, as can what's known as galvanic skin response. This area of research is still relatively new, but it is gaining momentum, and we are starting to see products that implement the techniques.

Source: Explorer Research

Recognizing emotional information requires extraction of meaningful patterns from data gathered. Some researchers are using machine learning techniques to detect such patterns.

Detecting emotion in people is one thing, but work is also going into computers that themselves show what appear to be emotions. Already in use are systems that simulate emotions in automated telephone and online conversation agents, to facilitate interactivity between humans and machines.



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There are many applications for affective computing. One is in education. Such systems can help address one of the major drawbacks of online learning versus in-classroom learning: the difficulty faced by teachers in adapting pedagogical situations to the emotional state of students in the classroom. In e-learning applications, affective computing can adjust the presentation style of a computerized tutor when a learner is bored, interested, frustrated, or pleased. Psychological health services also benefit from affective computing applications that can determine a client's emotional state.

Robotic systems capable of processing affective information can offer more functionality alongside human workers in uncertain or complex environments. Companion devices, such as digital pets, can use affective computing abilities to enhance realism and display a higher degree of autonomy.

Other potential applications can be found in social monitoring. For example, a car might monitor the emotions of occupants and invoke additional safety measures, potentially alerting other vehicles if it detects the driver to be angry. Affective computing has potential applications in human-computer interaction, such as affective "mirrors" that allow the user to see how he or she performs. One example might be warning signals that tell drivers if they are sleepy or going too fast or too slow. A system might even call relatives if the driver is sick or drunk (though one can imagine mixed reactions to such developments on the part of the driver). Emotion-monitoring agents might issue a warning before an angry email is sent, or a music player could select tracks based on your mood. Companies may even be able to use affective computing to infer whether their products will be well-received by the market by detecting facial or speech changes in potential customers when they read an ad or first use the product.

Affective computing is also starting to be applied to the development of communicative technologies for use by people with autism.



Many universities have done extensive work on affective computing, resulting in projects including something called the galvactivator, which was a good starting point. It's a wearable glove-like device that senses a wearer's skin conductivity, and maps values to a bright LED display. Increases in skin conductivity across the palm tend to indicate physiological arousal, so the display glows brightly. This has many potentially useful purposes, including selffeedback for stress management, facilitation of conversation between two people, or visualizing aspects of attention while learning. Along with the revolution in wearable computing technology, affective computing is poised to become more widely accepted, and there will be endless applications for affective computing in many aspects of life.

One future application of affective computing will be in Metaverse applications, which will humanize the avatar and add emotion as a 5th dimension, opening limitless possibilities. However, these advancements in affective computing which are racing to make machines more human will come with challenges, namely SSP (Security, Safety, Privacy) -- the three pillars of online users. We need to make sure all three pillars of online users are protected and well-defined. This is easier said than done, but clear guidelines of what, where, and who will use the data will speed up the acceptance of the hardware and software of affective computing, without replacing physical pain with the fear of data privacy, safety, and security breaches.



# WE ARE THE BAY

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## CONNECT WITH SFBU ON SOCIAL MEDIA

Connect with our social media channels to stay updated with news and happenings, and comment about what makes SFBU a great place to live and learn.



# UPCOMING EVENTS

DEC. 7TH

Student & Staff Game Night

## DEC. 16TH

Student & Alumni Virtual Meet and Greet

## **DEC. 18TH**

Student & Alumni Year End Dinner