February 24, 2020

**Title proposal for Research in Computer Science**

**Face Detection Using Epitomic Analysis**

* Conventional techniques for face recognition or detection are categorized into two classes; template based and feature based approaches. However, these approaches are too dependent on either features or color pixels alone, they are said to be too rigid to capture complex appearances. As one of the attempts to overcome these limitations, the epitome was introduced by Jojic and Frey in 2003, which can describe various aspects of complex images.
* Epitome is its miniature but compact summarization of its most textual and shape components of the original image. In addition, epitomic analysis focuses on the probabilities and statistics over the entire image.
* Expecting that this new approach would be useful to other vision applications, we tried to construct a probabilistic framework for face detection using the epitomic analysis, and then challenged to compare the performance with that of PCA analysis, which has been used to develop an efficient computational model for face recognition.

**Cognitive Radio Networks**

* automatically detects available channels in **wireless** spectrum, then accordingly changes its transmission or reception parameters to allow more concurrent **wireless** communications in a given spectrum band at one location. This process is a form of dynamic spectrum management

Submitted by:

Francis Rey Paradero

Submitted to:

Prof. Loremelo Catindoy

February 24, 2020

**Title proposal for Research in Computer Science**

**Facial Emotion Detection**

* ISs the process of **identifying** human **emotions** from **facial** expressions. This API can be used to monitor **emotions** associated with visual content shared on social media or photo sharing apps or build interactive video chat applications.

Submitted by:

Francis Rey Paradero

Submitted to:

Prof. Loremelo Catindoy