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A Dissertation By

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**for**

***TekNekk***

Posture Analysis and Detection for mobile phone users using  
Computation Intelligence.

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## **Abstract**

Smartphone usage have been rapidly increased by the time being. People used to manage every single task using smart devices. Smartphones, smart tablets and smartwatches are the latest trend in communication industry. So all the companies in the world paying lot of attention to be mobile centric and deliver all the services based on mobile technology. Because of the latest trend, people can perform food ordering to advanced uses like medical care assistance and channel doctors online.

Life is being so easy with all these technologies at people's fingertips. But no one is thinking on the down side of this smartphone usage. People can get used to smartphones and this can be a serious addiction and can be lead into many disadvantages especially like health problems. Text Neck / Tech Neck is the most serious health syndrome caused by unlimited usage of smartphones and all other smart devices. This syndrome is also called as "Turtle Neck Posture" because of the angle of the neck and face while using the phone.

While smartphone is being used by the user, continuous scanning of face is taking place in the device background. This helps to analyze the posture patterns of the user and harmful posture to the user. Once a bad posture detected, system prompts a warning message, dim the device display and disable the device touch.

Apart from these features, each time device get locked because of the bad posture, system send a request to server and saving the angle of face and device along with date / time. This is used to measure the correct posture progress of user by the time being and these data are very important to take medical decisions and give predictions of recovery.

**Subject Descriptors** - H.3.1: Content Analysis and Indexing ,  
I.4: IMAGE PROCESSING AND COMPUTER VISION