

The effects of compiler optimizations in face recognition system

One of the few challenges facing face recognition systems is real time processing. In order for a face recognition system to be viable for real world implementations, it needs to be fast enough to track and identify facial images and do on-the-fly one-to-many identification from a multitude of database images. This is time consuming since face recognition requires a complex process of pre-processing and post-processing to be done along with the actual processing itself. In order to save precious processing time and increase the processing speed, specific compiler optimizations could be applied to the algorithms to help in reducing system processing time and increase total system performance. In this paper, we explore different levels of compiler optimization techniques when applied to face recognition systems to help improve the algorithm's performance and in turn improve the entire system performance when implemented in real time and real life situations. A multitude of different compiler optimization techniques are tested and implemented during the stages of development and the effects of such optimizations are logged and compared.