# COMP480 Final Project: GIF Searching Based on CaPSuLe Algorithm

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## 1 Introduction

### 1.1 Abstract

Given efficient application of CaPSuLe algorithm[1] in image searching process, we are going to extend the idea of Locality Sensitive Hashing(LSH) into GIF searching. In GIF recognition area, the multi-image recognition and classification is computationally hard and large storage required with neural network such as CNN [2].

We will leverage existing CaPSule algorithm to achieve sequential multi-image searching in GIF with low memory and high efficiency. We believe that with cheaper computation cost, it is largely applicable for cloud-independent mobile applications and fast meme searching in the future.

## 2 References

[1] Moon, Yongshik, et al. "CaPSuLe: A Camera-Based Positioning System Using Learning." 2016 29th IEEE International System-on-Chip Conference (SOCC), 2016. Crossref, doi:10.1109/socc.2016.7905476.

[2] Li, Yuncheng, et al. "TGIF: A New Dataset and Benchmark on Animated GIF Description." 2016 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016, doi:10.1109/cvpr.2016.502.