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MONTHLY REPORT - DEC 2016

1. Research activities in November.
2. Research plan in October.

Collaborators: None.

1 Research activities in November

	MOTIF-AWARE GRAPH EMBEDDING	DISTRIBUTED EMBEDDING
TOPIC	Improve graph embeddings by using dominant motifs.	Collaboration with Defago-sensei's lab on distributed computing.
IDEA	Comparing my embedding method with other existing methods on new planar graph datasets and bipartite datasets.	Application of graph embedding on a distributed environment and computing the embedding in a distributed settings.
ACTIVITIES	Firstly, I have published my code on github [1]. Secondly, I have revised my previous implementations and test procedure. I also have revised other authors' implementations. Finally, I have chosen new undirected graph datasets with community ground truth to compare my algorithm with. I also used the artificial network generated from Choong-san's master thesis.	I have discussed with Professor Defago about some possible collaboration between network/machine learning and distributed algorithm. Currently I am reading Professor Defago's provided materials about distributed graph algorithms. One of the interesting application is to propose a graph embedding algorithm in a distributed environment. Another is to study the bound for Byzantine General Problem on an arbitary network topology.

[1] https://github.com/gear/motifwalk/

2 Research plan in December

	DECEMBER - 2016
TOPIC	Random processes on graph and distributed graph algorithms.
PLAN	I will continue to study graph embeddings and the underlying randomness in this algorithm mathematically. Besides, I will also consider a distributed solution for the graph embedding problem, possibly application using GPU.