Abdullah-Al Mamun
Curriculum vitae

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PUBLICATION

Abdullah-Al Mamun, *Tian Mi, Robert Aseltine, Sanguthevar Rajasekaran*, "Efficient sequential and parallel algorithms for record linkage", *J Am Med Inform Assoc* 2014;21:252-262.

RESEARCH WORK

AUGUST 2012 – MAY 2013
Record Linkage - Single Linkage Clustering

This project employs single linkage based hierarchical clustering. We improved our existing sequential algorithm as well as devised brand new parallel algorithm for this problem. This project produced a very nice publication. Our algorithm improved the previous version in several folds.

JANUARY 2013 – SEPTEMBER 2014
Minimum Spanning Tree Problem

We have developed an algorithm that outperformed best-known algorithms for minimum spanning tree problem. We also propose an efficient parallel version of this algorithm. The algorithm uses several basic graph algorithms. We are expecting a good publication from this work.

AUGUST 2013 – AUGUST 2014
Record Linkage - Complete Linkage Clustering

Real life applications require perfect accuracy for record linkage. We have developed an efficient complete linkage based hierarchical clustering method which fulfills client satisfaction. This algorithm produces almost perfect accuracy in finding clusters. We are going for another publication with this astonishing result.

JANUARY 2014 – AUGUST 2014
Web Tool for Record Linkage

Huge achievement in record linkage methods has pushed us to make them freely available for interested agencies. We have almost completed the tool for single linkage clustering algorithm. The second tool will be available after some time. The website www.rlatools.com provides proper instructions to use these tools.

COURSE WORK

I have already covered some advanced courses such as advanced algorithms, approximation algorithms, string algorithms, high performance computing, big data analytics, bioinformatics, computational genomics.

EDUCATION

2012 – PRESENT	**Doctor of Philosophy** COMPUTER SCI & ENG *University of Connecticut*
2009	**Bachelor of Science** COMPUTER SCI & ENG *Bangladesh Univ of Eng & Tech*

WORK EXPERIENCE

2011-2012	**ITIW** *Software Engineer*
2009-2011	**Aeron Technologies** *Software Engineer*

AWARDS

2014	PreDoctoral Fellowship Award
2013	PreDoctoral Fellowship Award

PROJECTS

2014
External Memory MST

In this project we devise efficient external memory algorithm which basically extends our in-core algorithm. We have achieved a good I/O complexity.

2013
Population Structure Inference

We propose deterministic sampling based clustering algorithm for this problem.

SOFTWARE SKILLS

LANGUAGE	C/C++, Java, AS3, Objective-C
DATABASE	Oracle, MySQL
SCRIPTING	ActionScript3, HTML, LaTex
ANALYSIS TOOL	MatLab, R
OPERATING SYSTEM	Mac OS, Linux, Windows