



Tentative List of Project Titles

Programme	:	B.Tech (CSE)	Semester	:	WIN:2020-2021
Course	:	Large Scale Data Processing	Code	:	CSE3025
Faculty	:	Dr. Ramesh Ragala	Slot	:	G2
Class Number	:	CH2020215001372		:	

1. MR-Mafia: Parallel Subspace Clustering Algorithm Based on MapReduce For Large Multi-dimensional Datasets
2. An implementation of basic Extreme Learning Machine implementation in MapReduce Framework
3. Traffic and Log Data Captured During a Cyber Defense Exercise → ¹. In this project apply any machine learning algorithms on this dataset to get inference.
4. Canadian Institute for Cybersecurity (CIC) project in collaboration with Canadian Centre for Cyber Security (CCCS) ² → In this project apply any machine learning algorithms on this dataset to get inference.
5. An implementation of Extremely Fast Decision Tree in MapReduce Framework. ³
6. An implementation fo Multi-Layered Gradient Boosting Decision Trees in MapReduce Framework. ⁴
7. An implementation of a MapReduce-based distributed SVM. ⁵
8. An implementation of CUR decomposition in MapReduce Framework. ⁶
9. An implementation of Strassen's Matrix Multiplication using MapReduce. ⁷
10. An implementatino of scalable k-menas++ in MapReduce framework. ⁸
11. An implementation of Cholesky matrix decomposition in MapReduce framework. ⁹, ¹⁰
12. An implementation of Non-negative matrix factorization in MapReduce framework ¹¹

¹<https://zenodo.org/record/3746129#.YDErBerhVNg>

²<https://www.unb.ca/cic/datasets/andmal2020.html>

³<https://arxiv.org/pdf/1802.08780.pdf>

⁴<https://papers.nips.cc/paper/2018/file/39027dfad5138c9ca0c474d71db915c3-Paper.pdf>

⁵<https://paperswithcode.com/paper/a-mapreduce-based-distributed-svm-algorithm>

⁶<https://web.mit.edu/jaillet/www/general/itsc13-cur.pdf>

⁷<https://people.engr.tamu.edu/andreas-klappenecker/csce411-s17/csce411-set4b.pdf>

⁸<https://theory.stanford.edu/~sergei/papers/vldb12-kmpar.pdf>

⁹<http://www.seas.ucla.edu/~vandenbe/133A/lectures/chol.pdf>

¹⁰<https://www.sciencedirect.com/science/article/pii/B9780128114537000135>

¹¹<http://statweb.stanford.edu/~tibs/sta306bfiles/nmmf.pdf>

13. An implementation of QR decomposition in MapReduce framework. ¹²
14. An implementation of LU Decomposition in MapReduce framework. ¹³
15. An implementation of Multi-layer perceptron in MapReduce for classification task ¹⁴
16. An project using BigDL for analysis on images. ¹⁵
17. An implementatoin of Sigular Value Decomposition in MapReduce framework. ¹⁶
18. An implementation of tensor decomposition techniques in MapReduce framework. ¹⁷

¹²<https://www.math.ucla.edu/~yanovsky/Teaching/Math151B/handouts/GramSchmidt.pdf>

¹³http://www.math.iit.edu/~fass/477577_Chapter_7.pdf

¹⁴<http://www.cnel.ufl.edu/courses/EEL6814/chapter3.pdf>

¹⁵<https://software.intel.com/content/www/us/en/develop/tools/frameworks/bigdl.html>

¹⁶<https://web.cs.iastate.edu/~cs577/handouts/svd.pdf>

¹⁷<https://arxiv.org/pdf/1711.10781.pdf>