

Spring 2019 Senior Project

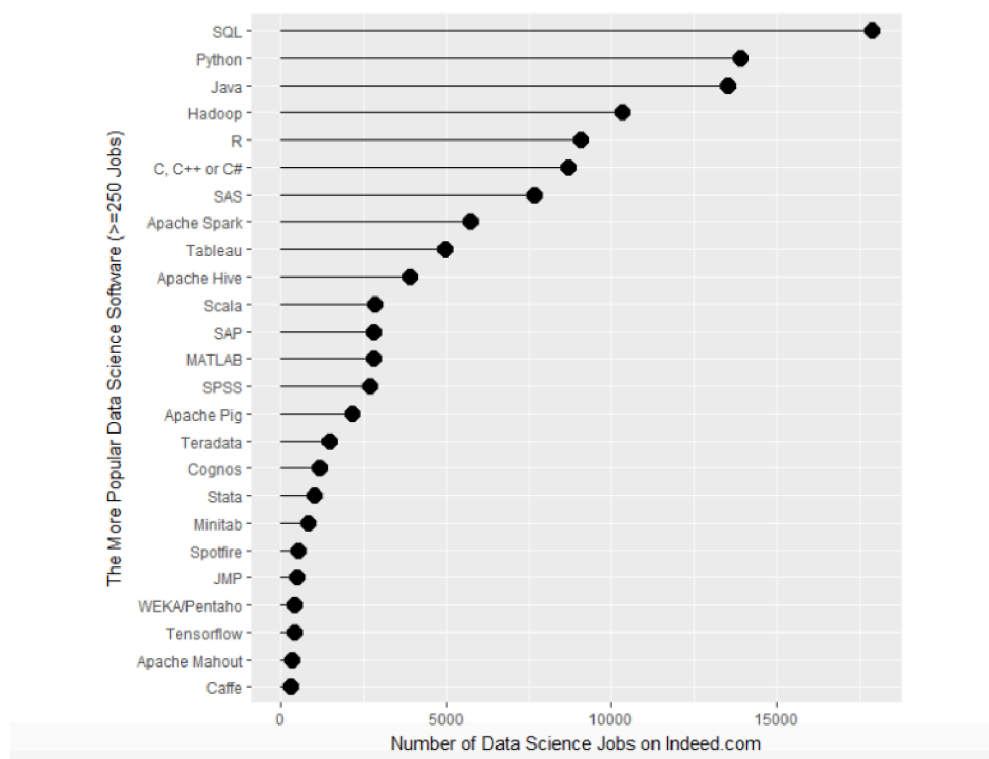
Title of the Project: **Random Lasso & Hi-Lasso Libraries**

Team members:

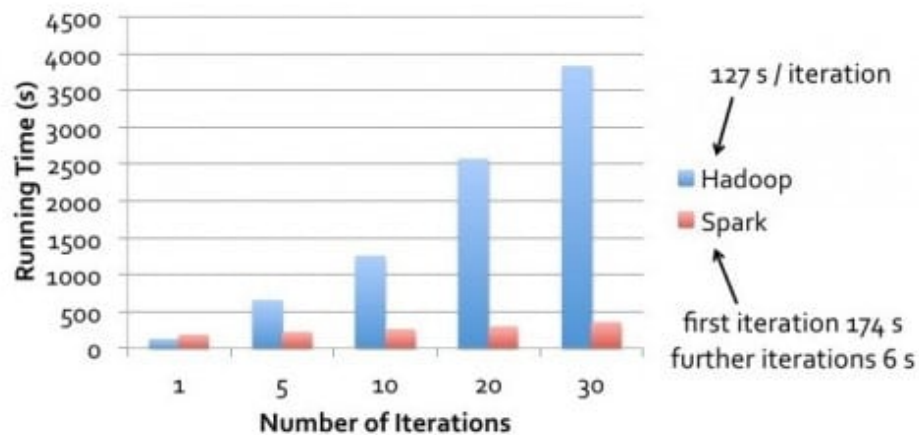
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Adjustments

We will be adding a parallel programming option to our R and Python libraries for random lasso. We want this package to be taken advantage by any level of high performance computing researchers. Our findings favor Spark both in its performance and rising marketability. PySpark and RSpark are flavors of packages for Python and Spark respectively. We want the user to have the option to take advantage of multiple cores through a simple argument within the functions we are building.



Logistic Regression Performance



We can see Spark outperforms Hadoop for regression analysis, and random lasso is a form of regression analyst.

Phases

All tasking is done in parallel chronologically, except for parallel programming additions to packages which will happen after the package is created. Note that Hi Lasso packages and parallel programming is an optional future ambition. Also, publication is an ambition as well.

- I. Random Lasso Package
 - a. R
 - b. Python
- II. Parallel Programming in Random Lasso
 - a. RSpark
 - b. PySpark
- III. Hi Lasso Package (Optional)
 - a. R
 - b. Python
- IV. Parallel Programming in Hi Lasso (Optional)

- a. RSpark
- b. PySpark

V. Website

- a. Instructions on Packages and Installation
- b. Educational Material on Random Lasso and Hi Lasso
- c. Information on Project Contributors
- d. Dashboard for Simulating Data

VI. Publication

- a. Performance Analysts
- b. Literature Review
- c. Software Flavored Paper

View our GitHub for more detailed tasking:








<https://github.com/samskhan/KSULasso>

<> Code
Issues 9
Pull requests 0
Projects 3
Wiki
Insights

Random Lasso Senior Project

11 commits
1 branch
0 releases
1 contributor

Branch: master
New pull request
Create new file
Upload files
Find file
Clone or download

 James Matthew Hamilton	Removed hidden and unused DS_Store files.	Latest commit b613070 7 hours ago
 Python	Removed hidden and unused DS_Store files.	7 hours ago
 R	Removed hidden and unused DS_Store files.	7 hours ago
 Web	Added folders for organization of project	23 days ago
 Capstoneproposal.pdf	Proposal	4 days ago
 README.md	added links	23 days ago
 lassoproposal.pdf	uploaded proposal pdf	4 days ago

<input type="checkbox"/>	<div> <div>9 Open</div> <div>2 Closed</div> </div>	Author ▾	Labels ▾	Projects ▾	Milestones ▾	Assignee ▾	Sort ▾
<input type="checkbox"/>	<div> <div>Subset PBMCs_DNAe_rawdata.xlsx</div> <div>R</div> <div>data</div> </div> <div>#9 opened 11 days ago by jamesmatthewhamilton</div>						
<input type="checkbox"/>	<div> <div>Research how code documentation is done.</div> <div>documentation</div> </div> <div>#8 opened 11 days ago by samskhan</div>						1
<input type="checkbox"/>	<div> <div>Research middleware.</div> <div>python</div> <div>web</div> </div> <div>#7 opened 11 days ago by samskhan</div>						1
<input type="checkbox"/>	<div> <div>Research templates that are compatible with python/R backend.</div> <div>python</div> <div>random lasso</div> </div> <div>#6 opened 11 days ago by samskhan</div>						3
<input type="checkbox"/>	<div> <div>Research how machine learning algorithms are structured.</div> <div>documentation</div> </div> <div>#5 opened 11 days ago by samskhan</div>						1
<input type="checkbox"/>	<div> <div>Forum about the Random Lasso paper.</div> </div> <div>#4 opened 14 days ago by samskhan</div>						
<input type="checkbox"/>	<div> <div>Python Package architecture</div> <div>python</div> </div> <div>#3 opened 14 days ago by samskhan</div>						1
<input type="checkbox"/>	<div> <div>Links to sources like packages, tutorials, articles that should be looked at for python.</div> <div>python</div> </div> <div>#2 opened 23 days ago by samskhan</div>						1
<input type="checkbox"/>	<div> <div>Paper repository for Literature review of Lasso</div> <div>R</div> <div>python</div> <div>web</div> </div> <div>#1 opened 23 days ago by samskhan</div>						2