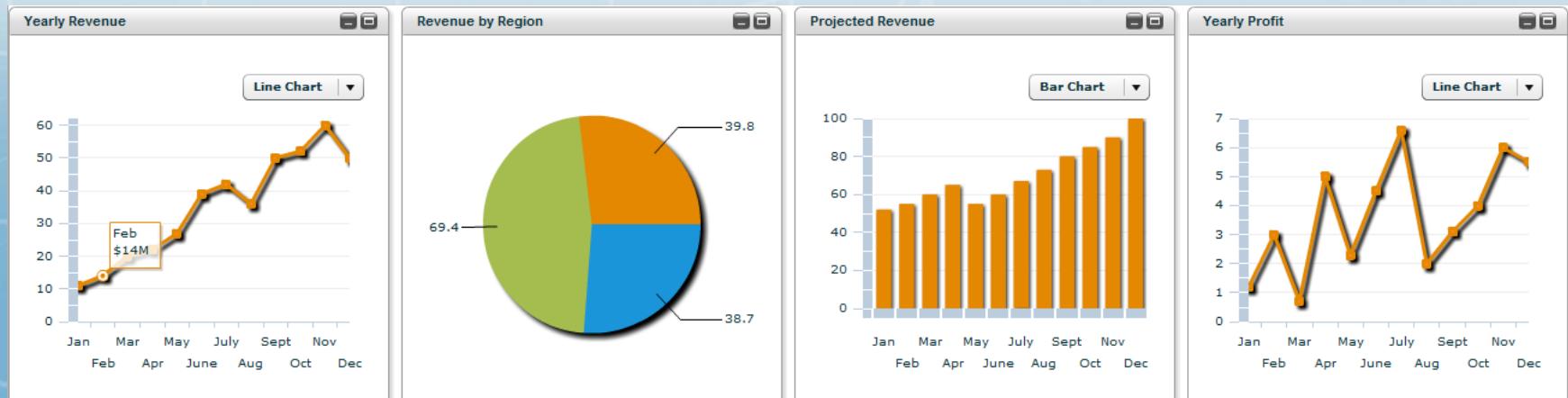


2013.7

CubeMiner 소개

Bigdata Knowledge Discovery

www.bicube.co.kr

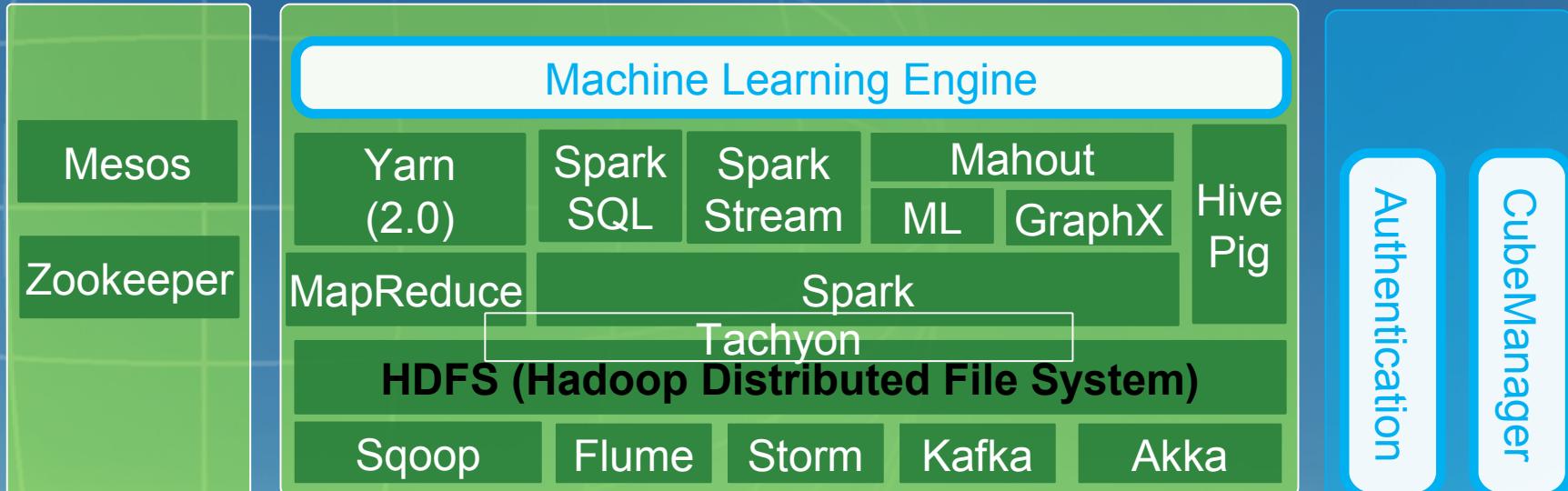




Architecture

BICube

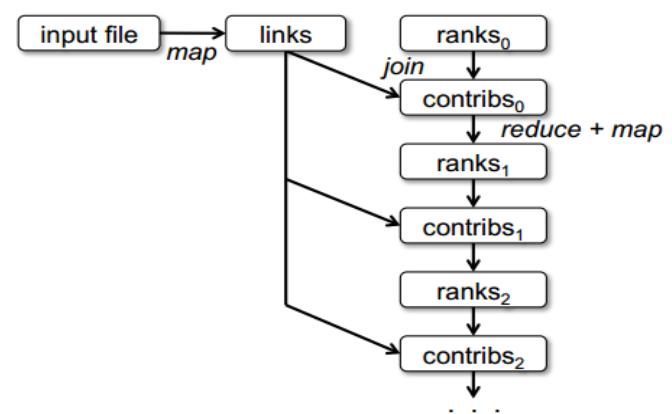
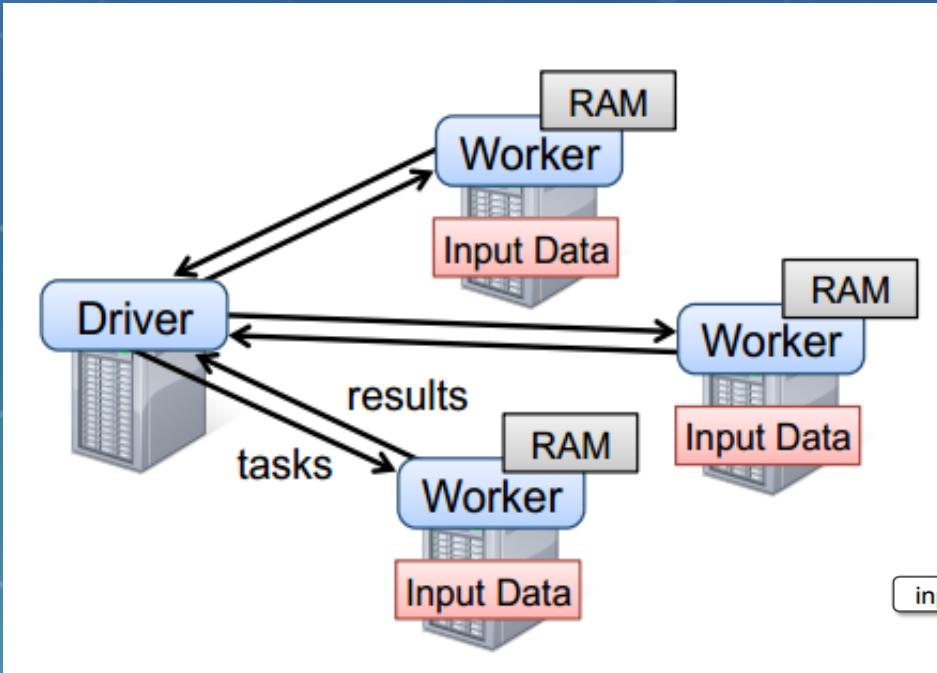
Manipul Mashup Preprocess Classify Cluster Associate Bioinfo Visual





In-Memory

In-memory MapReduce



**Cross Industry****Convergence**

Finance

HealthCare

Traffic

Disaster

Images

Domain Standard Analytics

Logistics

Security

CRM

Customer

Document

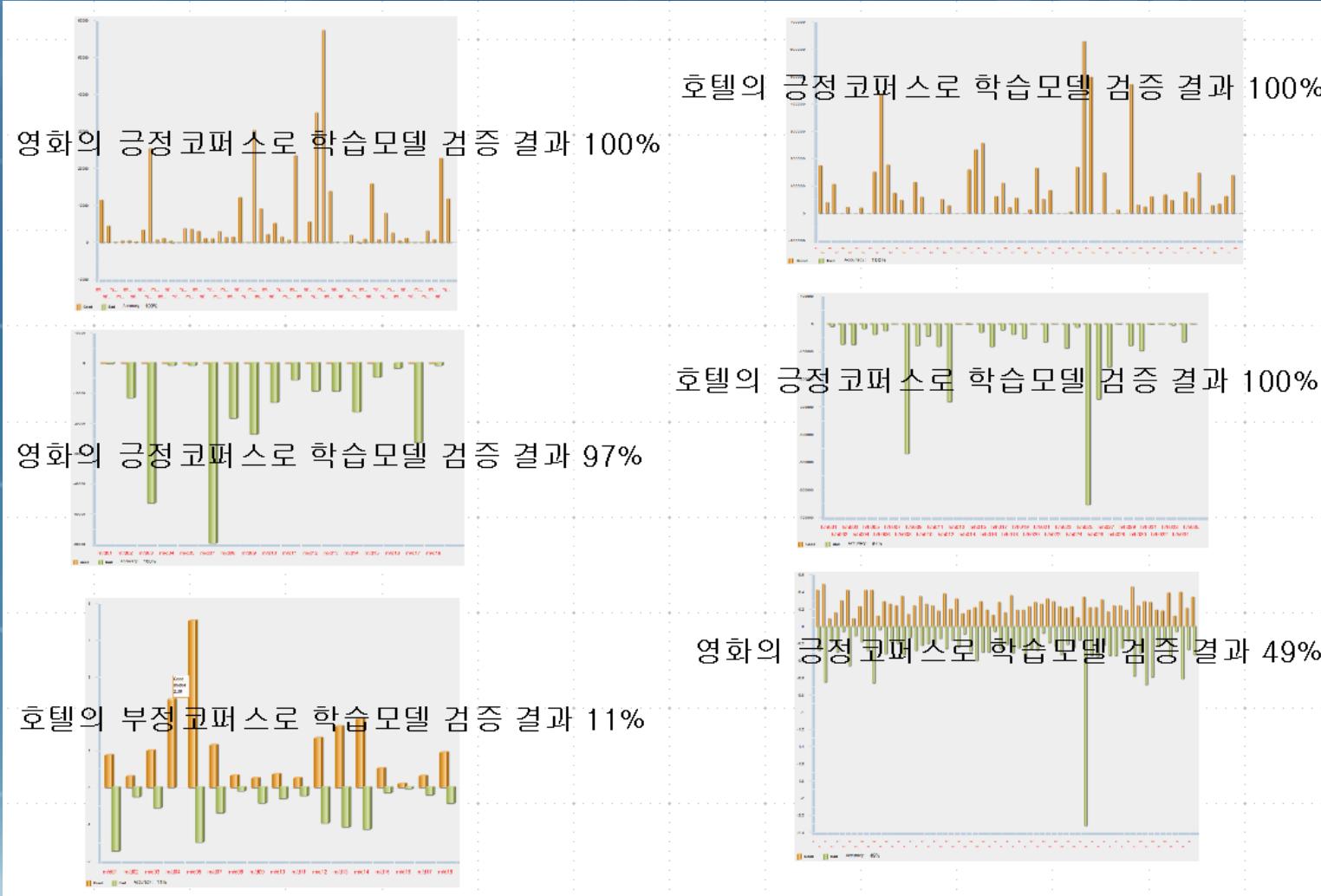


Main Algorithms

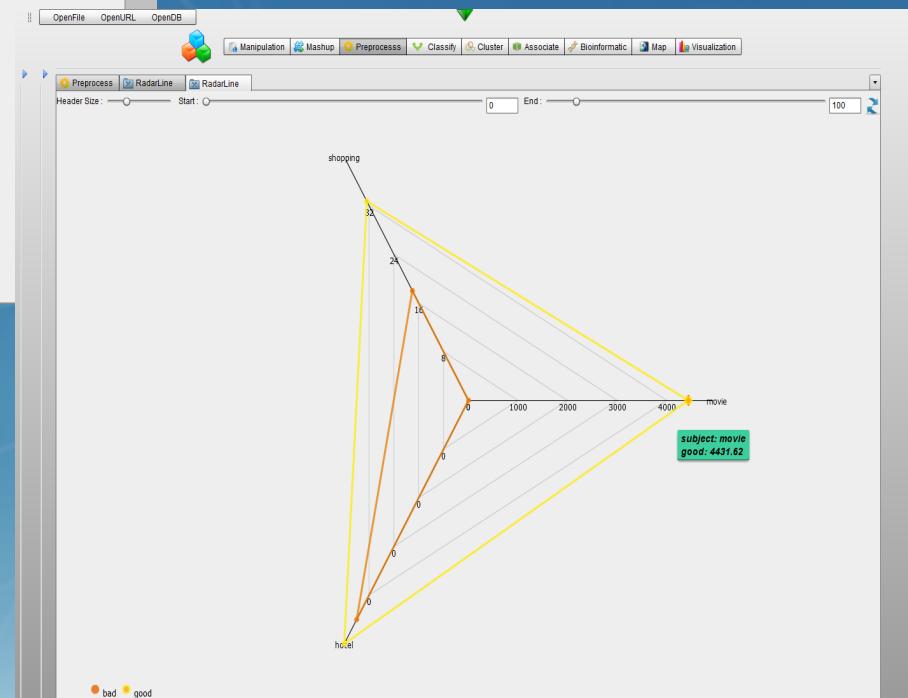
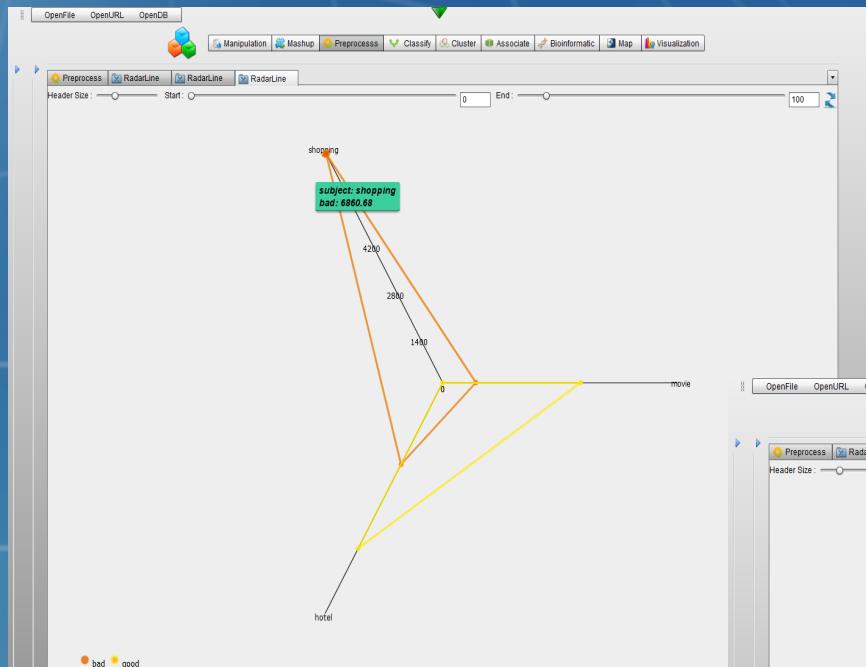
- Statistics and Machine Learning Algorithms on Mapreduce
- Run on Hadoop Distributed File System
- Run on Spark In-Memory Resilient Distributed Dataset

- ◆ Regression, MultiLinearRegression, KoreanMorpheme
- ◆ Logistic Regression, SVM, Adaboost, Neural Network
- ◆ RandomForest, NaiveBayssian, Timeseries Analysis
- ◆ Kmeans, LDA, HMM, PCA, SVD, CRF, TDA
- ◆ Covariance, Correlation, ROC, LSA, EigenFace Image
- ◆ CF Recommender, ConfusionMatrix, AUC
- ◆ Bagging, Wagging, ArcX4, LogitBoost, ModestAdaboost
- ◆ SAMME, BinaryClibration, IsonicCalibration...
- ◆ Discriminant Adaptive Nearest Neighbor
- ◆ Hierachical agglomerative clustering
- ◆ Kernel Recursive Least Square, Radial Base Network
- ◆ Local scaled density base clustering, EMGaussianMixture
- ◆ Sequential minimum optimization, Dual coordinate Descent
- ◆ T-Test, F-Test, G-Test, Chi-square-Test Anova etc....

Sentiment Analysis



Sentiment Analysis





Topic Analysis

Document-Topic Matrix Viewer

Docs	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15
doc0	철거민	집안형편	호연	득실	빈털터리	농업학교	어린이날	자명종	신사참배	영락없	미개지	인분	전업	아동교육	상겹
doc1	설	하길	아토	오인해	진한	따끔	즐거워하	체류기간	스커트	군데군데	논개	논바닥	되뇌이	가래	시건방지
doc2	횟수	허기증	방세	실무	피차	손기정	건너뛰	다음번	무의촌	심장마비	큰상	한자말	새신랑	법석	수협생
doc3	고개	끼	피	치	남	사라	시절	위로	세상	나가	소년	가면	사람은	통해	밝
doc4	줄달음 치	블럭	하변	회중	충	예상대로	집터	버금가	질끈	무너뜨리	벤자민	이답	흘러덩	형하	다세대
doc5	기백만	고용주	본원	독재정치	일률	구토	영원불변	결단성	졸렬	전취	철두철미	인내심	인류문화	곱슬곱슬하	부적합
doc6	정하	밀어붙이	배드민턴	묘사력	본전	고쳐지	배부르	쩔	과외공부	탕	안성	노소	타구	쌓이	사관생도
doc7	동자	복여	사퇴	기회주의	철권	매시간	재고	로잔	생산성	국민주의	완결성	포화	4프롤레타리아	몰레바퀴	코헨
doc8	곡식	농부	오래가	판서	외고	변번이	대면	마땅히	인지	대뜸	찌름	답안	병석	국무	막내
doc9	위지	사생아	소용돌이	지를	정설	모순구조	류즈	사회규정	규칠	물자	무정부상태	대자연	브란덴부르크	대변혁	호평
doc10	어때요	넉넉히	상관없이	외동딸	아치	라틴	세일론	포목점	예마틴	걸히	뿌듯	두더지	숯	칠하	화투놀이
doc11	고향집	머리채	들까불	벼들	끈끈하	정해년	시답	중낮	어지럼증	다리쉼	가벼워지	외침소리	가시내	분연히	옹송그리
doc12	으며	충의	돌격대	설욕	덕장	쓰라림	기초교육	원구	차돌	이강수	이격행위	국난	머리통	각층	진입
doc13	격동색	유성	가수	인사드리	후딱	청자	귀인	여의주	대거리	결연히	팡파짐	성덕	사시사철	화살대	헬쑥
doc14	합의제	공전	반다	숨어들	주파	허사	사금	웅성	독선	방심	주라	풍경화	아지	군력	살며시
doc15	중기	전광석화	지방대	구세	마장	수향	가없이	승리자	사시나무	안전지대	유방	쇄도	수초	문틀	너비
doc16	수룩화	소세지	두레	광주진압	깽기	독일수상	보금자리	통행금지	이기주의	육식	민주기	세원	사회학자	연화	우하
doc17	동경대	박진감	로써	기서	다스려지	유치홍	마르세이유	여하	더블린	서구열강	생성과정	마사	홍문관	부속학교	가오루
doc18	집산	식음	흉악	박장현	격자냉존	담판	시종관	김경하	한율	외래	전라남도	이용태	확실시	항일독립운동	이태인
doc19	반골	고린도전 서	오인	찰찰	꽃피우	심벌	특산물	박정수	눈시울	서정각	철석	인스	이종우	정신박약아	고단



Topic Analysis

Word-Topic Matrix Viewer

Topics	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20
topic1	시초	보습	인간학	비합리성	개고	설심	불일치	인식능력	진보주의	방매	유명해지	산악	박봉	범신론	자연질서	말엽	위험성	보족	정신	뮤즈
topic2	재향군인	윗자리	투병	총람	대륙침략	뿌리내리	활보	육군대신	우후죽순	정양	원사	언론인	박화성	올려놓	관북	군국주의자	한송이	경신	자마탐구	구인회
topic3	이봐	강제	거액	저력	일그러지	싸구려	노른자워	혈혈	나른	구들장	아닌게아니라	밀려가	군말	몰아가	겹지	만용	찬탄	전성기	호각지세	냄새나
topic4	군말	시제	급소	제때	호쾌	독견	무기력	선수권	앞섶	중원대륙	무순	무서리	역전승	아쉬워하	홍경	거수	털썩	겁경	굽실거리	포상
topic5	기찰	글지	꺾	경홍	오복	내객	처마꼴	입초	추장	깜짝거리	북변	밀실	건곤	창의문	제순	청심환	비도덕	앗	으아	다오
topic6	재현	할년	국외자	만고	파제예프	속달	봉인	꿰맞추	블라디보	헛간	왕년	미즈노	제라늄	고속도로	막힘없	로자	증식	해독	속적	교조증
topic7	도마위	보통교육	조직망	다방면	조체	수혜자	내과의사	번역관	연간	합작	포옹성	양감	등급	개혁안	난폭	처방전	메일	자금문제	서구문명	학위취득
topic8	남극	화강암	1시골	칠레	핏방울	라울	풍뎅이	나라시	수직	고요히	월계수	푸른빛	대룡대룡	비이	내음	여우	무지개빛	나비	오보	돋
topic9	1시골	월계수	드니	화강암	겨우살이	수직	나뭇등걸	덮히	에토	푸른빛	벽옥	나라시	라울	칠레	풍뎅이	양탄자	폭포수	여우	원예	남극
topic10	화강암	비이	나뭇등걸	1시골	대룡대룡	빗줄기	수직	양탄자	푸른빛	드니	무지개빛	오보	월계수	폭포수	푸드덕거리	이로	남극	밀림	칠레	덮히
topic11	엄연히	김동리	미션	승화	동맥	기노	방언근	9	구인회	독백	1관북	정음사	손쉽게	정정의	순문	시민생활	복사꽃	산불	지면관계	눈가루
topic12	남극	풍뎅이	나비	경비원	불식	이래저래	문명세계	전성	죄값	양탄자	어업	불신감	합작	유용하	중국학	다되	관변	사업주	심대	견의서
topic13	나뭇등걸	1시골	파헤치	적기	허상	공문서	김동리	보리스	영인	주범	1관북	국가지상주의	잔병	잡지사	급전	7만주국	선미	별건	이용진	기자생
topic14	여유만만	유약	정치생활	구속력	흑사병	자기도취	복해	폭군	가두시워	방청	격론	사기꾼	에테르	미숙련	선전자	밀어닥치	창시자	트렁크	의석	실효
topic15	전충	대중조직	고등교육기관	따분	기술면	남아프리카	돼지우리	투자대상	영유	역동	강타	중국학	오클라호마	개인교습	이용가치	심사숙고	놀라워하	정치지도자	매섭	소관사항
topic16	1시골	석천	팔면	아천인수	동격	조복	은모	습관화	주사기	까르르	목청껏	자기용	대충시	빼꾸기	나귀	사춘기	작아지	김광섭	양모	왁
topic17	1시골	벽옥	비이	양탄자	나뭇등걸	남극	멀찌감치	황금빛	청초	두문불출	복심	무심결에	관자	나신	궁실	돛자리	꺾	쥘령	별당	일투족
topic18	칠레	드니	초록빛	수직	라울	나라시	덮히	풍뎅이	고등교육기관	교육과정	합작	텃밭	나카야마	중부	조가비	날라다주	개전	오버	택시	출판계
topic19	투병	급전	이희준	문화단체	의학전문	일편	방언근	규선	조판	경쟁심	차주	보완	자력갱생	합빠	보통일	전량	교원생활	태극출판사	부도덕성	민족운동
topic20	화강암	핏방울	겨우살이	무지개빛	고요히	비이	월계수	빗줄기	풍뎅이	라울	나라시	푸드덕거리	1시골	남극	칠레	가워	케이	수직	벽옥	코피

Similarity Analysis



Similarity Analysis



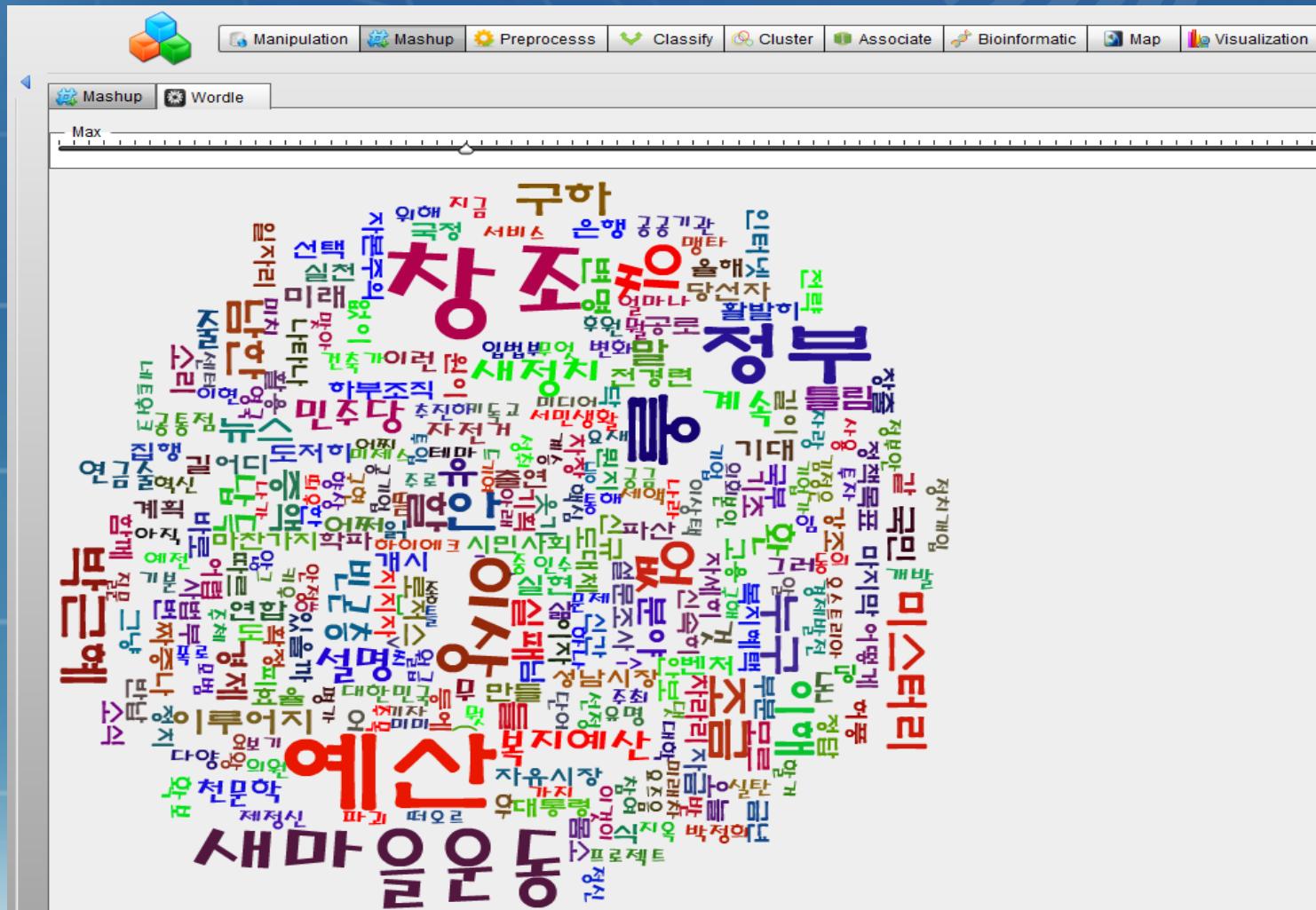
Manipulation Mashup Preprocess Classify Cluster Associate Bioinformatic Map Visualization

Preprocess CosineMatrix CosineMatrix

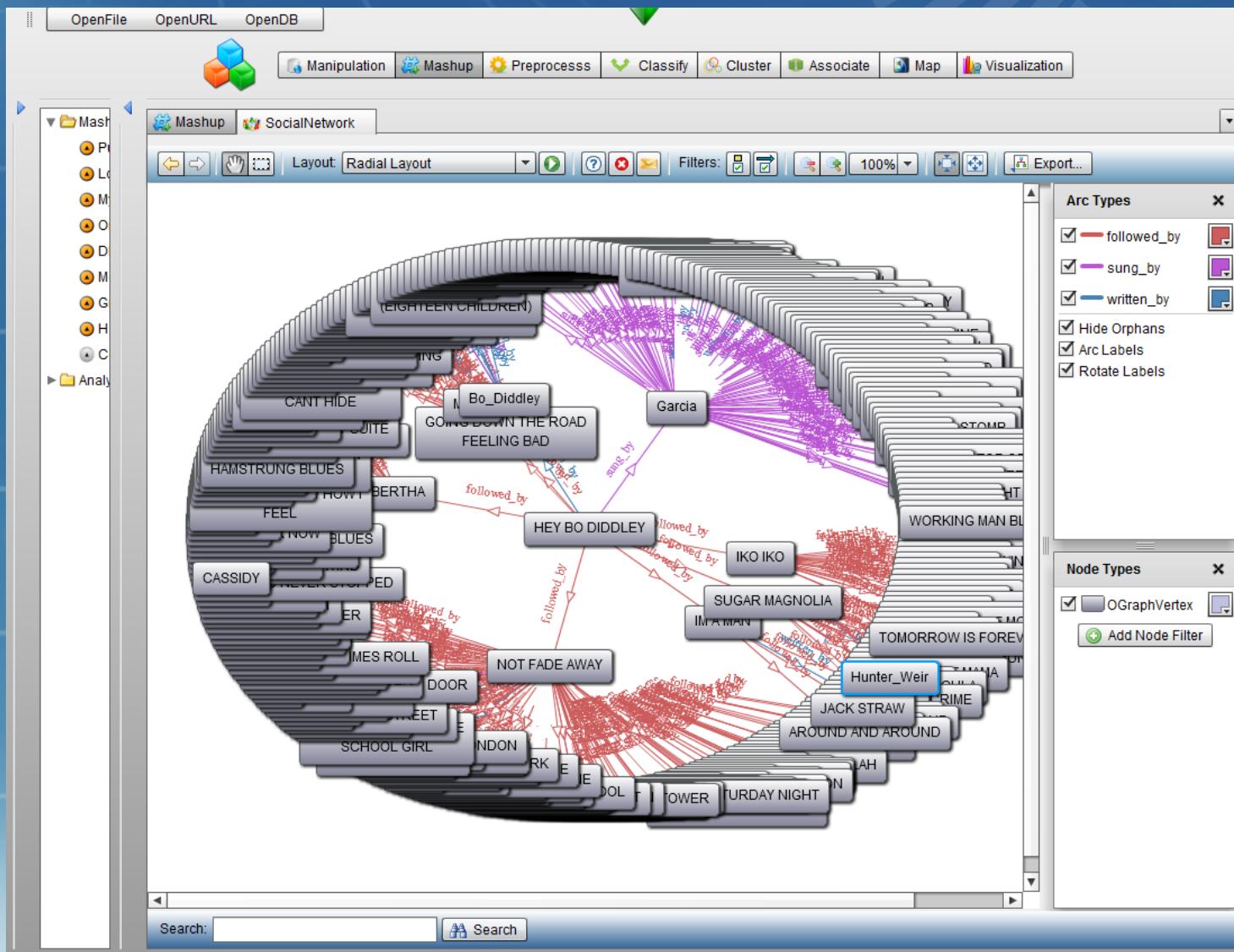
Editable Header Size : Start: End:

Docs	doc/c01	doc/c02	doc/c03	doc/c04	doc/c05	doc/c06	doc/c07	doc/c08	doc/c09	doc/c10	doc/c11	doc/c12	doc/c13	doc/c14	doc/c15	doc/c16	do...	
doc/c01	1.0																	
doc/c02	0.9	1.0																
doc/c03	0.77	0.89	1.0															
doc/c04	0.0	0.0	0.0	1.0														
doc/c05	0.9	0.96	0.87	0.0	1.0													
doc/c06	0.57	0.81	0.53	0.0	0.74	1.0												
doc/c07	0.79	0.89	0.64	0.0	0.75	0.84	1.0											
doc/c08	0.38	0.0	0.0	0.05	0.0	0.0	0.08	1.0										
doc/c09	0.17	0.32	0.22	0.45	0.12	0.36	0.6	0.0	1.0									
doc/c10	0.33	0.6	0.41	0.0	0.66	0.86	0.47	0.0	0.0	1.0								
doc/c11	0.91	0.81	0.81	0.0	0.91	0.42	0.55	0.23	0.01	0.37	1.0							
doc/c12	0.14	0.0	0.0	0.0	0.0	0.0	0.15	0.63	0.0	0.0	0.0	1.0						
doc/c13	0.12	0.0	0.19	0.14	0.0	0.0	0.0	0.7	0.0	0.0	0.12	0.26	1.0					
doc/c14	0.32	0.41	0.57	0.0	0.61	0.24	0.0	0.0	0.0	0.59	0.65	0.0	0.0	1.0				
doc/c15	0.0	0.0	0.0	0.46	0.0	0.05	0.04	0.06	0.29	0.03	0.0	0.0	0.0	0.0	1.0			
doc/c16	0.02	0.0	0.0	0.32	0.01	0.15	0.06	0.0	0.19	0.19	0.05	0.0	0.0	0.0	0.98	1.0		
doc/c17	0.0	0.0	0.0	0.5	0.0	0.08	0.04	0.0	0.36	0.04	0.0	0.0	0.0	0.0	0.99	0.95	1.0	
doc/c18	0.03	0.0	0.0	0.15	0.05	0.16	0.0	0.0	0.0	0.27	0.09	0.0	0.0	0.09	0.92	0.98	0.88	1.0
doc/c19	0.53	0.63	0.28	0.0	0.45	0.79	0.91	0.05	0.68	0.38	0.2	0.29	0.0	0.0	0.26	0.25	0.31	0.17
doc/c20	0.62	0.73	0.46	0.0	0.77	0.85	0.61	0.0	0.0	0.86	0.53	0.15	0.0	0.42	0.0	0.11	0.0	0.23
doc/c21	0.27	0.0	0.09	0.0	0.0	0.0	0.03	0.9	0.0	0.0	0.1	0.63	0.89	0.0	0.0	0.0	0.0	0.0
doc/c22	0.4	0.3	0.55	0.31	0.36	0.0	0.1	0.23	0.29	0.0	0.62	0.0	0.45	0.46	0.03	0.01	0.0	0.0

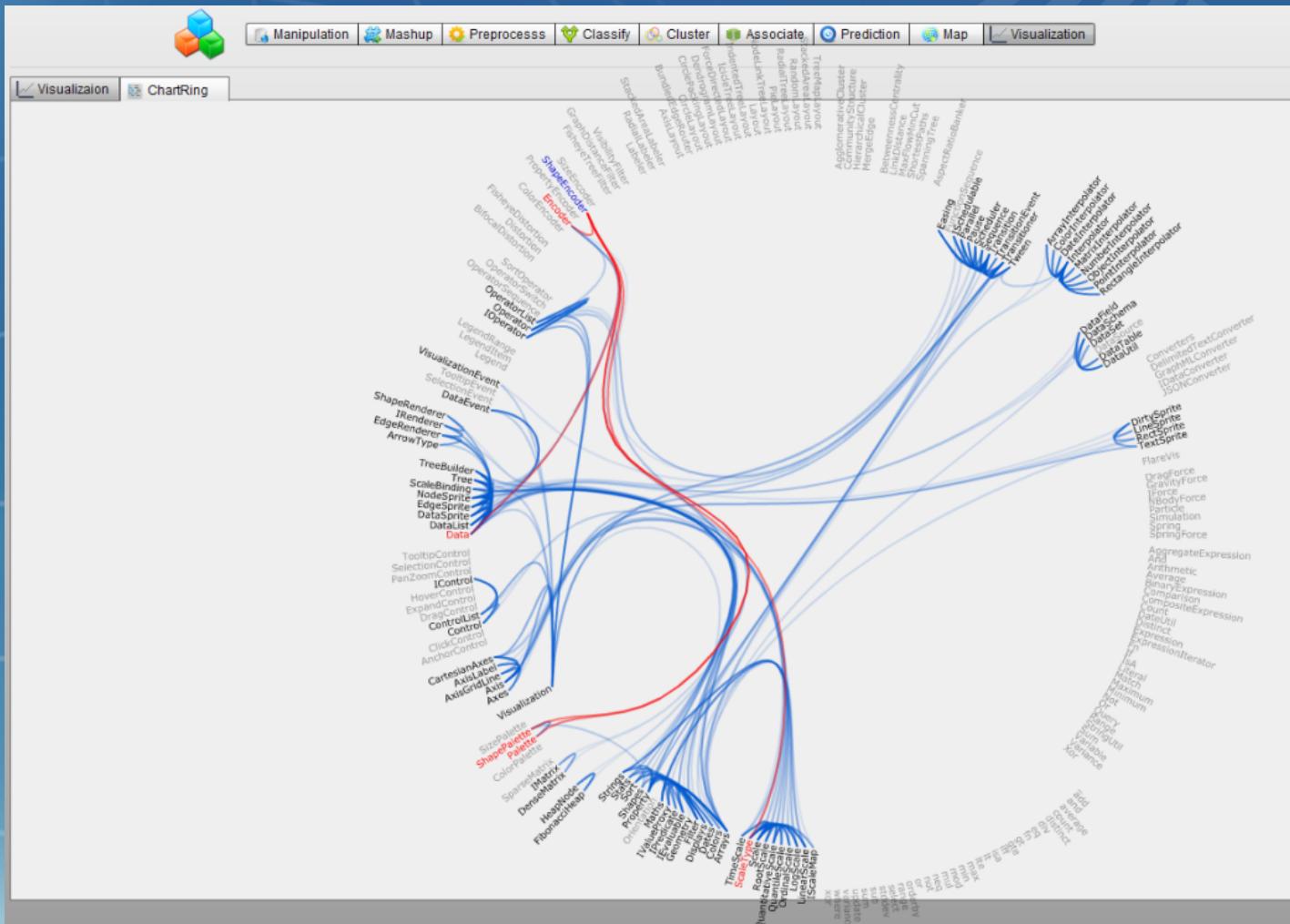
Word Cloud



Social Analysis

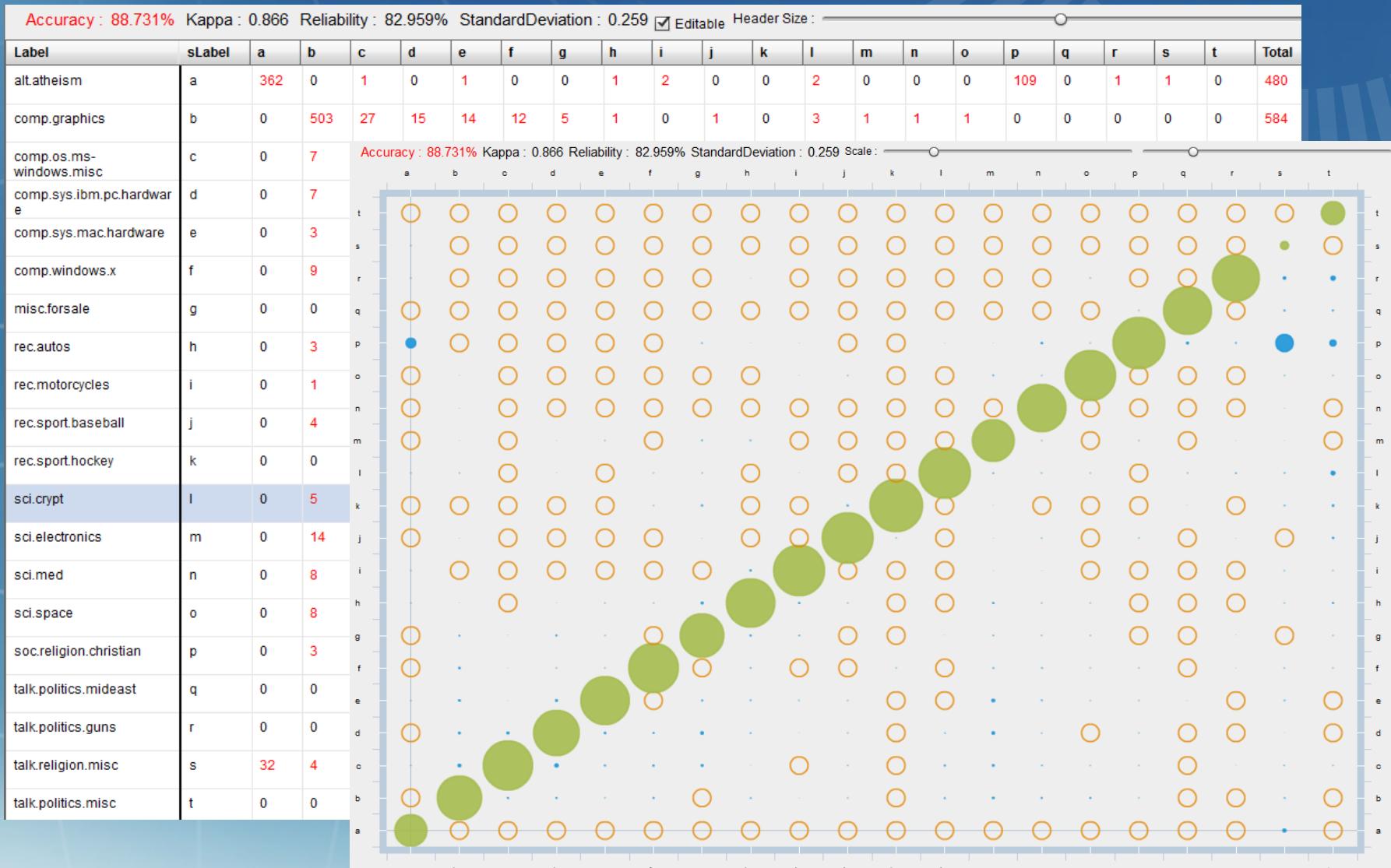


Relation Analysis

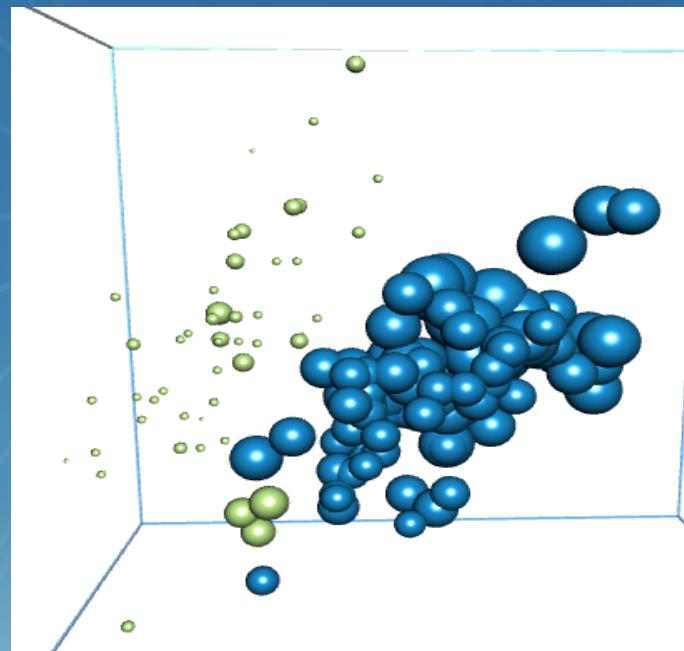
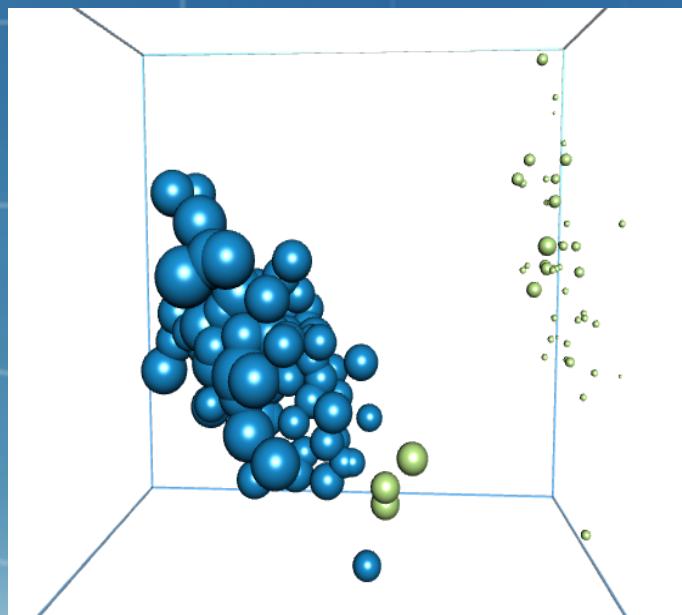
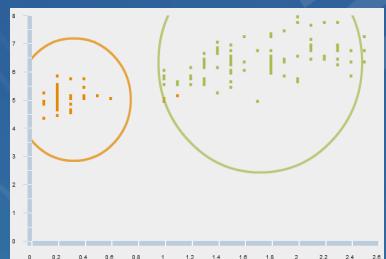
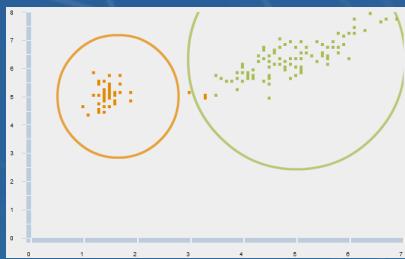




Confusion Matrix



Clustering



3D Visualization on GPU

MBA



MBA

Manipulation | Mashup | Preprocesss | Classify | Cluster | Associate | Bioinformatic | Map | Visualization

FontSize : 14 Generation Transaction : 43 Editable

Associate **ARules**

sourceitem	targetitem	support	confidence	lift	conviction
Hot Dogs	Hot Dog Buns	0.04188096987509184	0.7125	0.005654761904761905	3.1562470050793854
98pct. Fat Free Ham	Hamburger Buns	0.048493754592211606	0.6804123711340206	0.00535757772546473	2.837050555805741
White Bread	Aspirin	0.04188096987509184	0.6263736263736264	0.0038665038665038664	2.3578899598046417
White Bread	Tomatoes	0.04041146216017634	0.6111111111111112	0.0037722908093278463	2.265351107379028
White Bread	Toothpaste	0.04775900073475386	0.6018518518518519	0.0037151348879743942	2.2126685234864927
Eggs	Toothpaste	0.04481998530492285	0.5648148148148148	0.0033821246396096697	2.0159144558913185
White Bread	Wheat Bread	0.043350477590000735	0.5619047619047619	0.0034685479129923573	2.010909497492253
2pct. Milk	Wheat Bread	0.0426157237325496	0.5523809523809524	0.0037072547139661233	1.98946331702284
Hot Dogs	Sweet Relish	0.0470242468772961	0.5517241379310345	0.004378762999452655	2.0242468772961058
2pct. Milk	Toothpaste	0.043350477590000735	0.5462962962962963	0.0036664180959482978	1.9627824678732624
White Bread	Onions	0.0426157237325496	0.5321100917431193	0.003284630195945181	1.882857184019824
White Bread	98pct. Fat Free Ham	0.04922850844966936	0.5275590551181102	0.0032565373772722853	1.8647195689444032
White Bread	Potato Chips	0.05143277002204261	0.5263157894736842	0.003248862897985705	1.85982529186056
Eggs	Sweet Relish	0.04481998530492285	0.5258620689655172	0.003148874664464175	1.850297241333244
Eggs	Potatoes	0.045554739162380606	0.5254237288135594	0.0031462498731350858	1.8485882229453137
Eggs	Wheat Bread	0.04041146216017634	0.5238095238095238	0.003136583974907328	1.8423218221895663
Hamburger Buns	98pct. Fat Free Ham	0.048493754592211606	0.5196850393700787	0.00535757772546473	1.933583069343901
Eggs	Cola	0.04041146216017634	0.5188679245283019	0.003106993560049712	1.823399749319272
White Bread	Cola	0.04041146216017634	0.5188679245283019	0.0032028884230142093	1.83103542666148
2pct. Milk	Cola	0.04041146216017634	0.5188679245283019	0.003482335063948335	1.8508881877512209
2pct. Milk	Onions	0.041146216017634095	0.5137614678899083	0.0034480635428852905	1.8314502377552575
Sweet Relish	Hot Dogs	0.0470242468772961	0.5079365079365079	0.004378762999452655	1.8590457680547985
Eggs	Onions	0.04041146216017634	0.5045871559633027	0.00302147997582816	1.7708384357906766
Eggs	Potato Chips	0.048493754592211606	0.49624060150375937	0.0029715006078069425	1.7414982398806846
White Bread	Potatoes	0.0426157237325496	0.4915254237288136	0.003034107553881565	1.732574087680627
Eggs	98pct. Fat Free Ham	0.045554739162380606	0.4881889763779528	0.002923287283700316	1.714101622110439
2pct. Milk	Sweet Relish	0.041146216017634095	0.4827586206896552	0.003239990742883592	1.7216752387950038
Eggs	2pct. Milk	0.05216752387950037	0.47651006711409394	0.002853353695293976	1.675860509806138
White Bread	2pct. Milk	0.05143277002204261	0.4697986577181208	0.002899991714309388	1.6615760935276556
Potato Chips	98pct. Fat Free Ham	0.043350477590000735	0.4645669291338583	0.0034929844295778817	1.6851363616717812
Eggs	White Bread	0.05510653930931376	0.46296296296296297	0.002772233111554667	1.633585852187793
Eggs	Hot Dogs	0.0426157237325496	0.4603174603174603	0.002756391977948864	1.6255780784025584



CV on Hadoop

Preprocess ImageSimilarity

This screenshot shows the ImageSimilarity interface. It displays three pairs of images with similarity scores. The first pair is 'train:subject01.sad' and 'test:subject01.sad' with a similarity of 2.0.0. The second pair is 'train:subject02.sad' and 'test:subject02.sad' with a similarity of 3.0.0. The third pair is 'test brucelee.gif' and 'train:subject03.surprised' with a similarity of 1.16983219508302313.

Train Image	Test Image	Similarity
train:subject01.sad	test:subject01.sad	2.0.0
train:subject02.sad	test:subject02.sad	3.0.0
test brucelee.gif	train:subject03.surprised	1.16983219508302313

Manipulation Mashup Preprocess Classify Cluster

Preprocess ImageDirView ImageDirView ImageDirView

Max Line : Path : /user/root/images/face/eigen

This screenshot shows the ImageDirView interface with a path set to '/user/root/images/face/eigen'. The interface displays a 4x5 grid of cat images, each labeled with its file name: ef-cat07.gif, ef-cat10.gif, ef-cat12.gif, ef-cat02.gif, ef-cat13.gif, ef-cat01.gif, eigenface-0.gif, ef-cat06.gif, ef-cat00.gif, ef-cat03.gif, ef-cat04.gif, ef-cat09.gif, ef-cat08.gif, ef-cat11.gif, and ef-cat05.gif.



CV on Hadoop

A screenshot of the BICube software interface. At the top, there is a navigation bar with icons for Manipulation, Mashup, Preprocess, and Classify. Below the navigation bar, there is a sub-menu with icons for Preprocess, ImageSimilarity, ImageDirView, and ImageDirView. A text input field shows "Path: /user/root/images/face/images/cats-train". Below the path, there is a grid of 15 cat images arranged in four rows. The first row has four images labeled cat13.gif, cat09.gif, cat02.gif, and cat01.gif. The second row has four images labeled cat03.gif, cat05.gif, cat00.gif, and cat04.gif. The third row has four images labeled cat11.gif, cat07.gif, cat08.gif, and cat12.gif. The fourth row has two images labeled cat06.gif and cat10.gif.

Manipulation Mashup Preprocess Classify

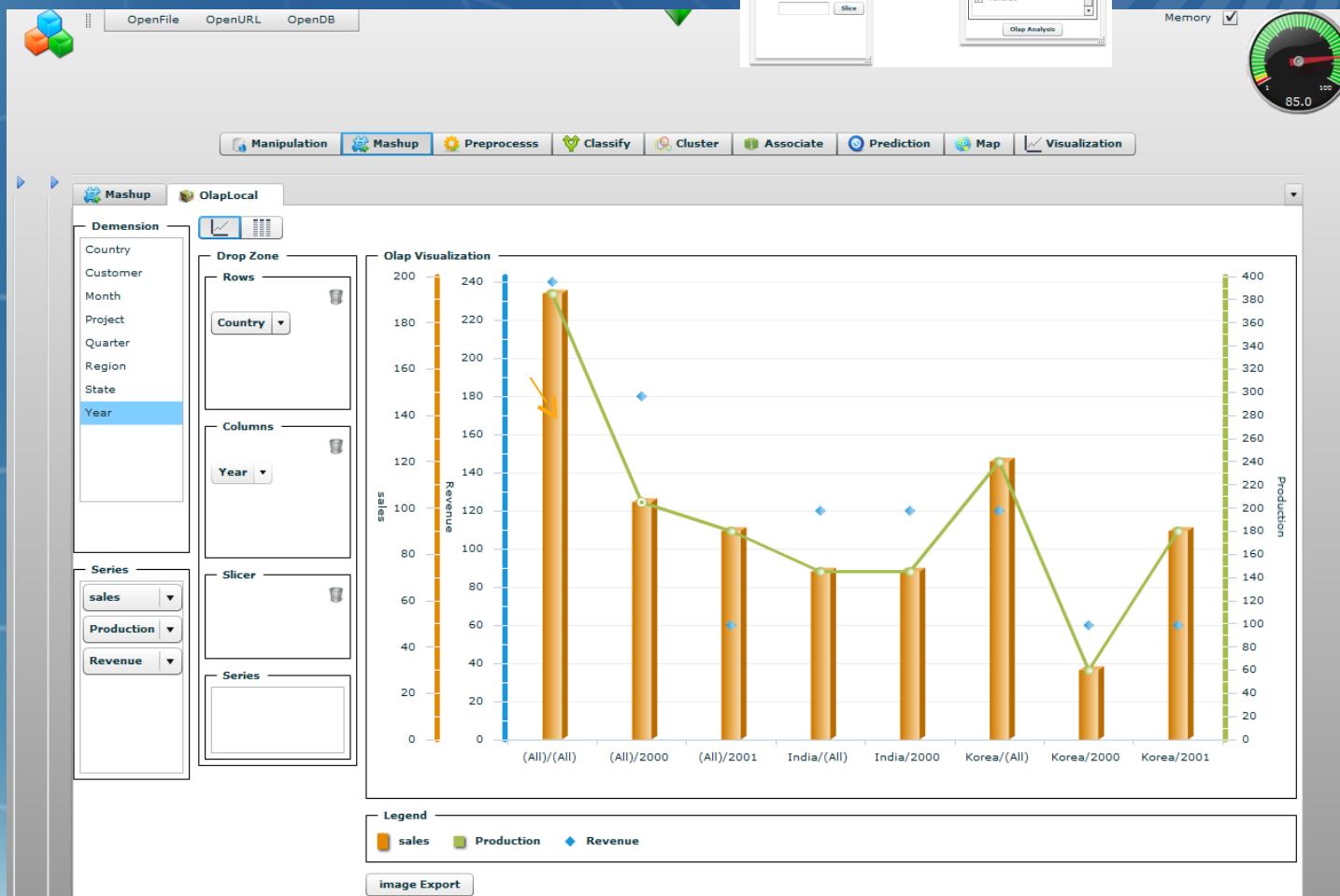
Preprocess ImageSimilarity ImageDirView ImageDirView

Max Line : —

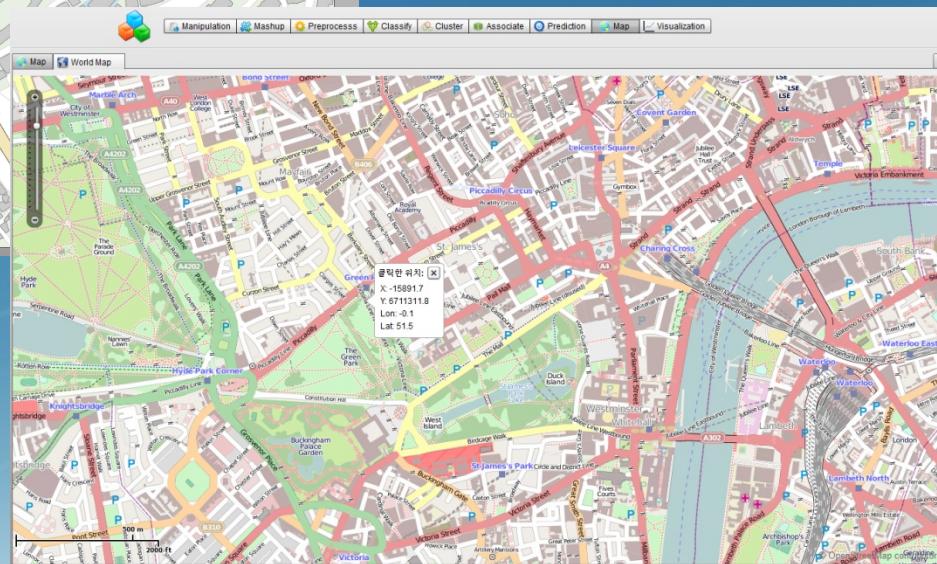
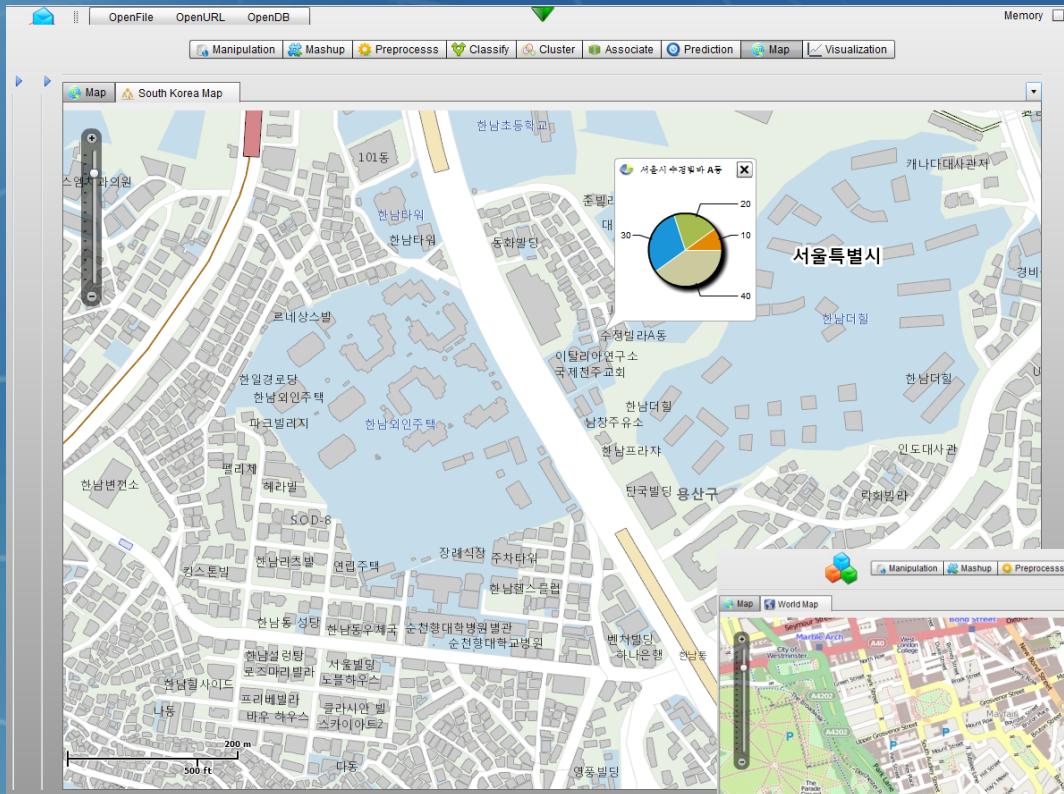
Path : /user/root/images/face/images/cats-train

cat13.gif	cat09.gif	cat02.gif	cat01.gif
cat03.gif	cat05.gif	cat00.gif	cat04.gif
cat11.gif	cat07.gif	cat08.gif	cat12.gif
cat06.gif	cat10.gif		

OLAP ad-hoc



Geo Analysis





PDF analysis

Singular Value Decomposition Tutorial

Kirk Baker

March 29, 2005

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2 Points and Space	2
3 Vectors	2
4 Matrices	3
4.1 Matrix Notation	3
5 Vector Terminology	4
5.1 Vector Length	5
5.2 Vector Addition	5
5.3 Scalar Multiplication	6
5.4 Inner Product	6
5.5 Orthogonality	6
5.6 Normal Vector	7
5.7 Orthonormal Vectors	7
5.8 Gram-Schmidt Orthonormalization Process	7

Manipulation Mashup Preprocess Classify Cluster Associate Map Visualization

FontSize : 12 Editable

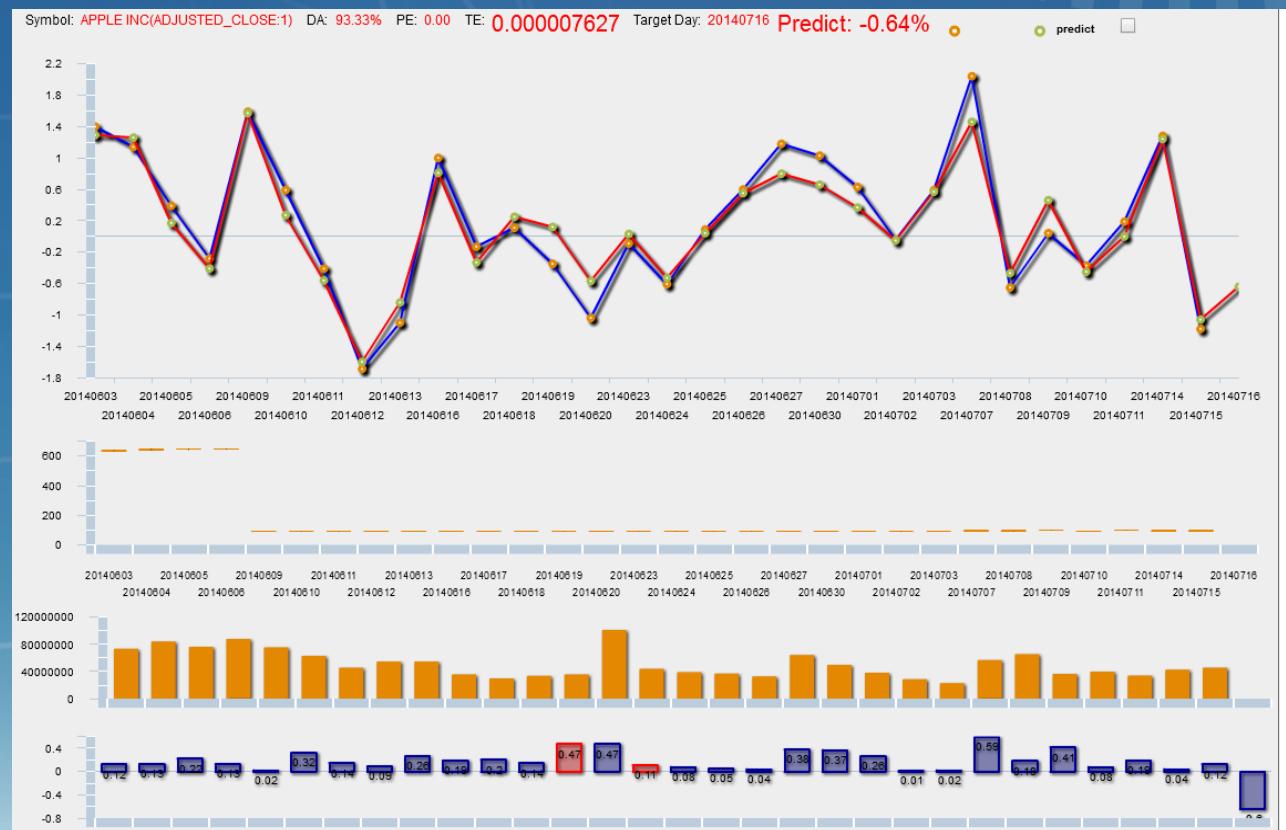
key	value
orial.pdf	Singular Value Decomposition Tutorial Kirk Baker March 29, 2005 Contents 1 Introduction 2 2 Points and Space 2 3 Vectors 3 4 Matrices 3 4.1 Matrix Notation 4 5 Vector Terminology 5 5.1 Vector Length 5 5.2 Vector Addition 6 5.3 Scalar Multiplication 6 5.4 Inner Product 6 5.5 Orthogonality 6 5.6 Normal Vector 7 5.7 Orthonormal Vectors 7 5.8 Gram-Schmidt Orthonormalization Process 7 6 Matrix Terminology 8 6.1 Square Matrix 8 6.2 Transpose 9 6.3 Matrix Multiplication 9 6.4 Identity Matrix 10 6.5 Orthogonal Matrix 11 6.6 Diagonal Matrix 11 6.7 Determinant 11 6.8 Eigenvectors and Eigenvalues 12 1 ROUGH DRAFT - USE AT OWN RISK: suggestions kbaker@ling.osu.edu 7 Singular Value Decomposition 14 7.1 Example of Full Singular Value Decomposition 16 7.2 Example of Reduced Singular Value Decomposition 21 8 References 23 1 Introduction Most tutorials on complex topics are apparently written by very smart people whose goal is to use as little space as possible and who assume that their readers already know almost as much as the author does. This tutorial's not like that. It's more a manifesto for the rest of us. It's about the mechanics of singular value decomposition, especially as it relates to some techniques in natural language processing. It's written by someone who knew zilch about



Neural Network

Recurrent Neural Network
 Feedforward Neural Network(Elman)
 Counterpropagation Neural Network
 Hopfield Neural Network
 Boltzman Neural Network
 Neat Neural Network
 Som Neural Network
 Art 1 Neural Network
 Bam Neural Network
 Adaline Neural Network

Timeseries forecasting



Log Analysis

The screenshot displays the BICube CubeMiner interface for log analysis. At the top, there's a navigation bar with buttons for OpenFile, OpenURL, and OpenDB. Below the navigation bar is a toolbar with various analytical functions: Manipulation, Mashup, Preprocess, Classify, Cluster, Associate, Prediction, Map, and Visualization.

In the center, a large window titled "Mashup" contains a "DataFilter" tab. This tab includes a search bar, a pattern input field set to "23/Jun/2012:00:29:33", and a "Field Name" dropdown set to "LogTime". The main area of the "DataFilter" tab shows a list of log entries:

```

logtext
115.23.255.210 - - [23/Jun/2012:00:29:33 +0900] "GET / HTTP/1.1" 403 202
115.23.255.210 - - [23/Jun/2012:00:29:35 +0900] "GET / HTTP/1.1" 403 202
115.23.255.210 - - [23/Jun/2012:00:29:36 +0900] "GET / HTTP/1.1" 403 202
115.23.255.210 - - [23/Jun/2012:00:29:37 +0900] "GET / HTTP/1.1" 403 202
115.23.255.210 - - [23/Jun/2012:00:29:45 +0900] "GET /index.jsp HTTP/1.1" 200 5
115.23.255.210 - - [23/Jun/2012:00:30:04 +0900] "GET /index.jsp HTTP/1.1" 200 5
115.23.255.210 - - [23/Jun/2012:00:30:05 +0900] "GET /index.jsp HTTP/1.1" 200 5
115.23.255.210 - - [23/Jun/2012:00:30:41 +0900] "GET /index.jsp HTTP/1.1" 200 31
115.23.255.210 - - [23/Jun/2012:11:07:18 +0900] "GET /index.jsp HTTP/1.1" 200 31
115.23.255.210 - - [23/Jun/2012:11:07:21 +0900] "GET /index.jsp HTTP/1.1" 200 31
115.23.255.210 - - [23/Jun/2012:11:07:22 +0900] "GET /index.jsp HTTP/1.1" 200 31
115.23.255.210 - - [23/Jun/2012:11:08:21 +0900] "GET /index.jsp HTTP/1.1" 200 31
115.23.255.210 - - [23/Jun/2012:11:08:25 +0900] "GET /index.jsp HTTP/1.1" 200 31
211.218.144.210 - - [25/Jun/2012:21:34:48 +0900] "HEAD / HTTP/1.0" 403 -
208.77.103.174 - - [26/Jun/2012:12:04:03 +0900] "POST /?d%20allow_url_include%3D1
61.157.236.176 - - [27/Jun/2012:07:25:48 +0900] "HEAD / HTTP/1.0" 403 -
59.23.55.132 - - [27/Jun/2012:20:44:01 +0900] "GET http://www.google.com/ HTTP/1.1"
195.70.36.86 - - [27/Jun/2012:22:58:02 +0900] "GET /w00tw00t.at.blackhats.romania.i
195.70.36.86 - - [27/Jun/2012:22:58:03 +0900] "GET /phpMyAdmin/scripts/setup.php H
195.70.36.86 - - [27/Jun/2012:22:58:03 +0900] "GET /phpMyAdmin/scripts/setup.php H
195.70.36.86 - - [27/Jun/2012:22:58:04 +0900] "GET /pma/scripts/setup.php HTTP/1.1"
195.70.36.86 - - [27/Jun/2012:22:58:05 +0900] "GET /myadmin/scripts/setup.php HTTP
195.70.36.86 - - [27/Jun/2012:22:58:05 +0900] "GET /MyAdmin/scripts/setup.php HTTP
82.223.246.144 - - [29/Jun/2012:12:57:59 +0900] "GET /w00tw00t.at.blackhats.romania
82.223.246.144 - - [29/Jun/2012:12:57:59 +0900] "GET /phpMyAdmin/scripts/setup.php
82.223.246.144 - - [29/Jun/2012:12:57:59 +0900] "GET /pma/scripts/setup.php HTTP/1.1
82.223.246.144 - - [29/Jun/2012:12:58:00 +0900] "GET /chirusadmin/scripts/saturn.nhr

```

At the bottom left, a sidebar lists various datasets: a_df, a_df1, a_list, affinity, aggre, apachelog2, ar, arules1, arules2, bsk.network, cereal, cereal2, dataFrame, fertilityrate, GDPpercapita, Groceries, Groceries2, group, igraph, kmeans, kmeans1, lifeexpectancy, lm.D9, olapData, pairs, pairs1. On the right side, a circular gauge indicates "Memory" usage at 81.0%.



Mash-up to Bigdata

Mash-up

- Put2HDFS
- Mysql2HDFS
- Oracle2HDFS
- DB2ToHDFS
- MongoDB2HDFS
- GraphDB2HDFS
- Hbase2HDFS
- CouchDB2HDFS

Mix Process

Mysql2HDFSProcess

Host & Database
Host: bicube.co.kr:3306 / foodmart ID: foodmart PW: *****

HDFS Path
/user/root/database/mysql

Max Count

SQL Query

TwitterSearchProcess

Twitter Search API

Search Query: []

Save To Hadoop
/user/root/preprocess/wordcount/data

Data Name & Max Count
Result: [] 100 GetData

OpenAPIProcess

Open API

API url: <http://api.worldbank.org/countries/all/indicators/SP.POP.TOTL?date=1960:2>

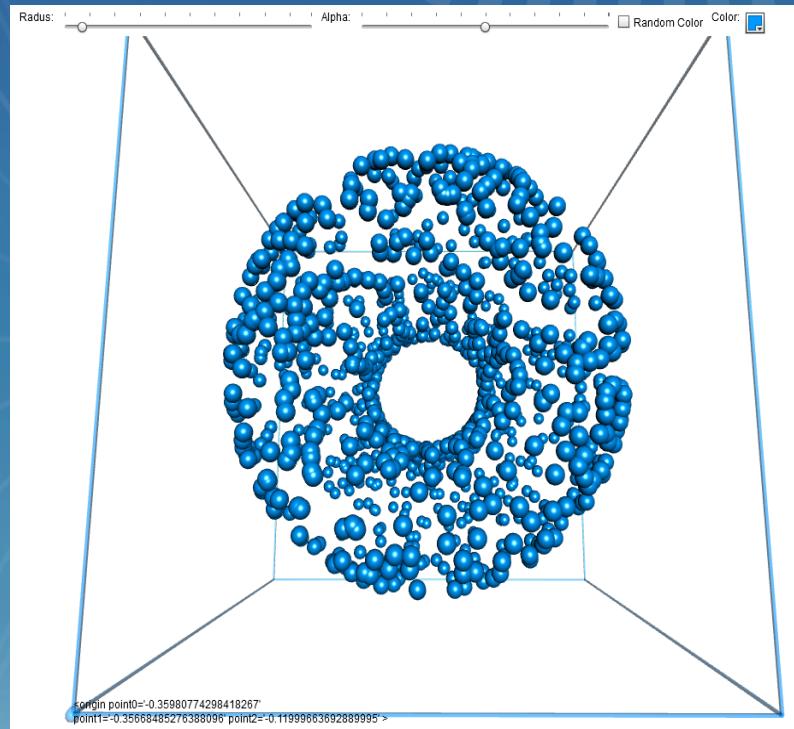
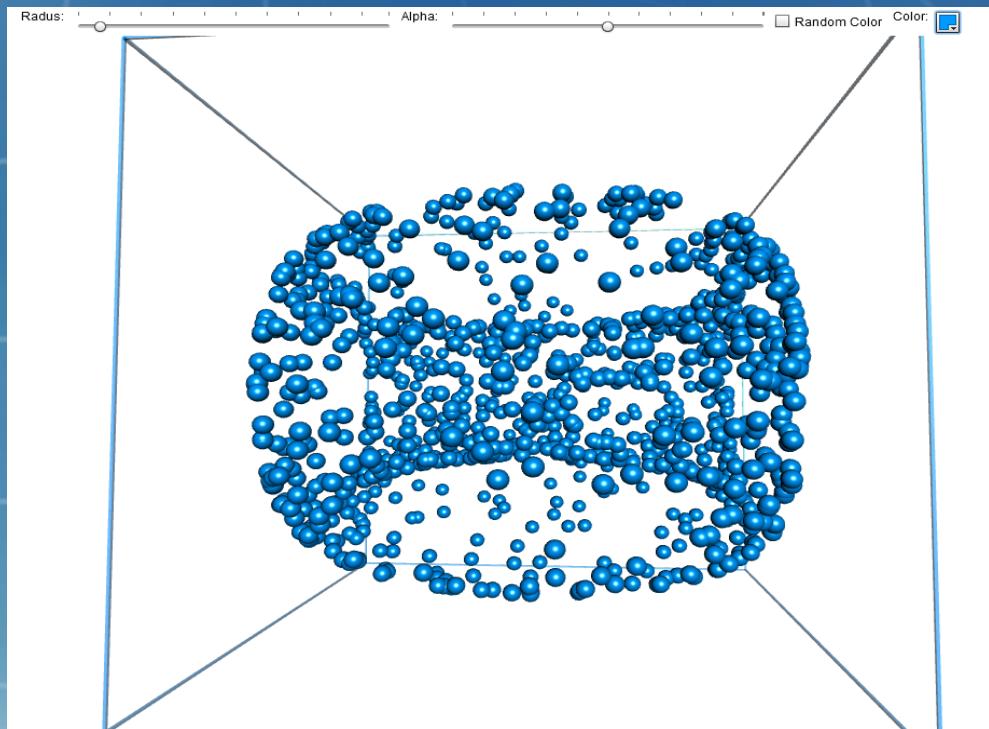
Data Name
[] useProxy

Data Type
JSON (radio button selected) XML GetData



3D Visualization

PointCloud on GPU for Topological Data Analysis





DIY-Component

Module Manager – Add components by yourself

Manipulation **Mashup** **Preprocesss** **Classify** **Cluster** **Associate** **Bioinformatic** **Map** **Visualization**

Classify **MenuEditor**

Font Size : Encoding: UTF-8 Max Line : 500

Browse Save to File Save Reset Expand View Source View Node Copy to Clipboard

Selected Node: [node] Node type: [element]

Attributes of node [node]

Name	Value
label	KoreanSpacer
icon	enableIcon
clickable	true

Add Update

Text

```

1 <root>
2 <node label="NaturalLanguageProcessing">
3 <node label="KoreanSpacer" icon="enableIcon" clickable="true"/>
4 <node label="KoreanTagger" icon="enableIcon" clickable="true"/>
5 <node label="KoreanStemmerSingle" icon="enableIcon" clickable="true"/>
6 <node label="KoreanStemmer" icon="enableIcon" clickable="true"/>
7 <node label="KoreanTopic" icon="enableIcon" clickable="true"/>
8 <node label="Baumwelch" icon="enableIcon" clickable="true"/>
9 <node label="Viterbi" icon="enableIcon" clickable="true"/>
10 <node label="HMMPredict" icon="enableIcon" clickable="true" tip="RandomSequenceGenerator"/>
</node>
11 <node label="function">
12 <node label="SimpleRegressionMR" icon="disableIcon" clickable="false"/>
13 <node label="MultipleRegression" icon="enableIcon" clickable="true"/>
14 <node label="MultipleRegressionGD" icon="enableIcon" clickable="true"/>
15 <node label="MultipleRegressionL2" icon="enableIcon" clickable="true"/>
16 <node label="MultipleRegressionL1" icon="enableIcon" clickable="true"/>

```

Add Rename Delete Copy Paste Update



DIY-UI

Process Manager- Process UI Design Manager

Font Size : Encoding: **UTF-8** Max Line :

Editable Path : com/bicube/diagrammer/classify/KoreanStemmer.xml

Selected Node: [com.bicube.ui.folder.CommandButton] Nod...																	
<ul style="list-style-type: none"> ■ <input type="checkbox"/> com.bicube.ui.box.TitledBorderBox <ul style="list-style-type: none"> ● com.bicube.ui.folder.FolderIcon ● mx.controls.TextInput ● com.bicube.ui.folder.FolderOpen ■ <input type="checkbox"/> com.bicube.ui.box.TitledBorderBox <ul style="list-style-type: none"> ● com.bicube.ui.folder.FolderIcon ● mx.controls.TextInput ● com.bicube.ui.folder.FolderOpen ■ <input type="checkbox"/> com.bicube.ui.box.TitledBorderBox <ul style="list-style-type: none"> ● com.bicube.ui.folder.FolderIcon ● mx.controls.TextInput ● com.bicube.ui.folder.FolderOpen ■ <input type="checkbox"/> com.bicube.ui.box.TitledBorderBox <ul style="list-style-type: none"> ● com.bicube.ui.folder.FolderIcon ● mx.controls.TextInput ● com.bicube.ui.folder.FolderOpen ■ <input type="checkbox"/> com.bicube.ui.box.TitledBorderBox <ul style="list-style-type: none"> ● mx.controls.Spacer ● mx.controls.CheckBox ● mx.controls.CheckBox ● mx.controls.CheckBox ● mx.controls.CheckBox <input checked="" type="checkbox"/> com.bicube.ui.folder.CommandButton 	Attributes of node [com.bicube.ui.folder.CommandButton] <table border="1"> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>type</td> <td>button</td> </tr> <tr> <td>remoteMethod</td> <td>runMethod</td> </tr> <tr> <td>javaClass</td> <td>com.bicube.hadoop.nlp.KoreanStemmer</td> </tr> <tr> <td>method</td> <td>exec</td> </tr> <tr> <td>openTap</td> <td>false</td> </tr> <tr> <td>resultType</td> <td>ArrayList</td> </tr> <tr> <td>tapClass</td> <td>com.bicube.ui.tap.preprocess.OpinionAnalysisChartTap</td> </tr> </tbody> </table> <p><input type="button" value="Add"/> <input type="button" value="Update"/></p> <p>Text</p> <pre> 1 <root> 2 <diagramPanel nodeName="KoreanStemmer" width="650" height="500"> 3 <com.bicube.ui.box.TitledBorderBox title="Input" layout="horizontal" width="100"> 4 <com.bicube.ui.folder.FolderIcon/> 5 <mx.controls.TextInput width="100" command="-i" text="/user/root/nlp/LSA/outSeq"/> 6 <com.bicube.ui.folder.FolderOpen/> 7 </com.bicube.ui.box.TitledBorderBox> 8 <com.bicube.ui.box.TitledBorderBox title="Output" layout="horizontal" width="100"> 9 <com.bicube.ui.folder.FolderIcon/> 10 <mx.controls.TextInput width="100" command="-o" text="/user/root/nlp/LSA/outStem"/> 11 <com.bicube.ui.folder.FolderOpen/> 12 </com.bicube.ui.box.TitledBorderBox> 13 <com.bicube.ui.box.TitledBorderBox title="Tagger Model" layout="horizontal" width="100"> 14 <com.bicube.ui.folder.FolderIcon/> 15 <mx.controls.TextInput width="100" command="-m" text="/user/root/upload/korean/swrc/korean-tagger.model"/> 16 <com.bicube.ui.folder.FolderOpen/> 17 </com.bicube.ui.box.TitledBorderBox> </pre> <p><input type="button" value="Add"/> <input type="button" value="Rename"/> <input type="button" value="Delete"/> <input type="button" value="Copy"/> <input type="button" value="Paste"/> <input type="button" value="Update"/></p>	Name	Value	type	button	remoteMethod	runMethod	javaClass	com.bicube.hadoop.nlp.KoreanStemmer	method	exec	openTap	false	resultType	ArrayList	tapClass	com.bicube.ui.tap.preprocess.OpinionAnalysisChartTap
Name	Value																
type	button																
remoteMethod	runMethod																
javaClass	com.bicube.hadoop.nlp.KoreanStemmer																
method	exec																
openTap	false																
resultType	ArrayList																
tapClass	com.bicube.ui.tap.preprocess.OpinionAnalysisChartTap																



BICube



Thank You ...