



SEASR

EDUCAUSE CAMP

Minneapolis, MN

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University of Illinois at Urbana Champaign

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SEASR Goals

This project will focus on developing, integrating, deploying, and sustaining a set of reusable and expandable software components and a supporting framework that will benefit a broad set of data mining applications for scholars in humanities.

The key goals established for this effort are a set of software centric directives:

- Support the development of a state-of-the-art software environment for data management and analysis of digital libraries, repositories and archives, as well as educational platforms that are expected to contribute to many of the humanities breakthroughs of the 21st century.
- Support the continued development, expansion, and maintenance of end-to-end software system – user interfaces, workflow engines, data management, analysis and visualization tools, collaborative tools, and other software integrated into a complete environment– to bring the full power of data analytics to the scholars.
- Support education and training for use of this software environment for analysis through workshops to promote its usage among scholars.

Project Highlights

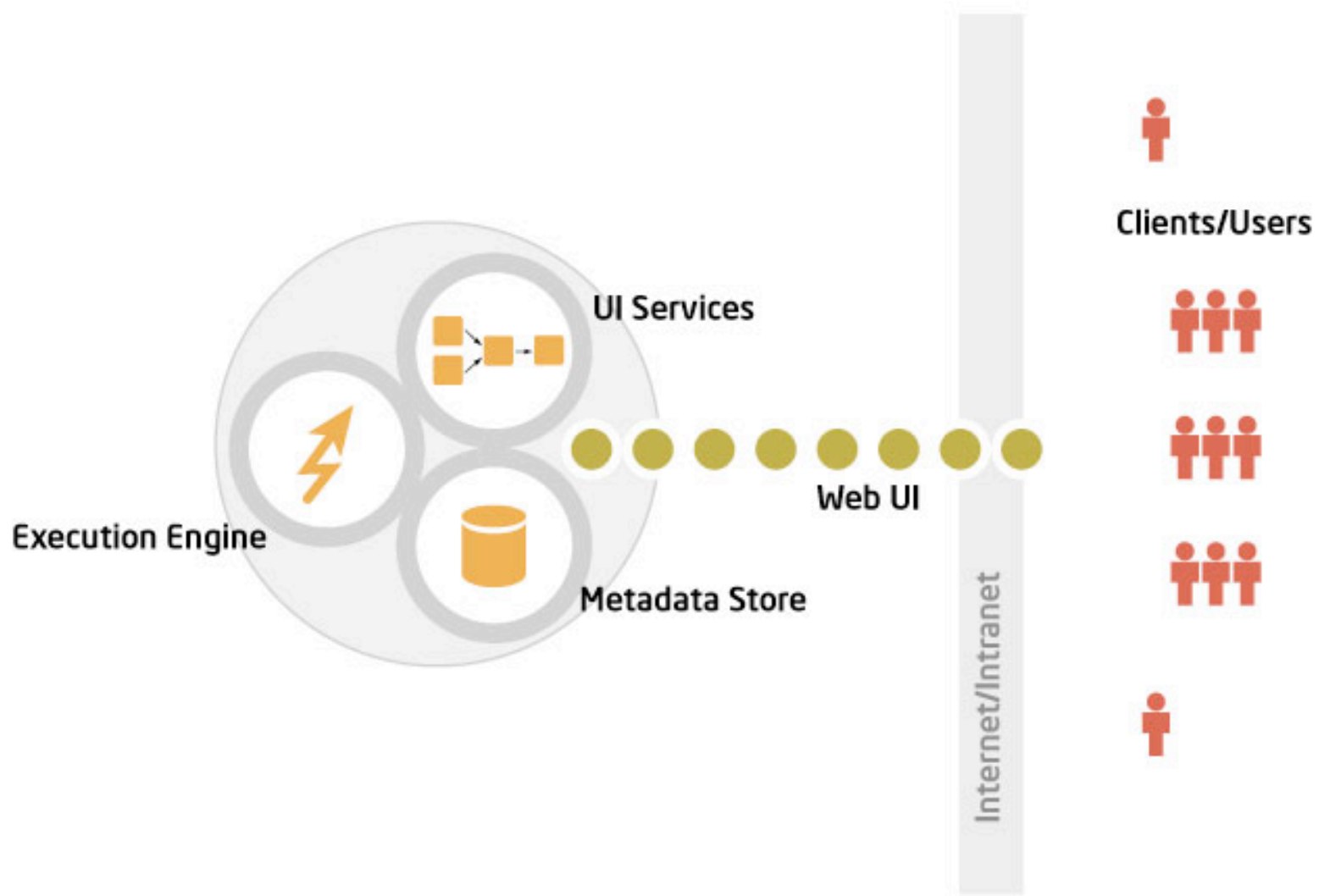
- SEASR will employ a comprehensive environment that integrates two complementary and revolutionary technical advances – Service Oriented Architecture and Semantic Web, into a single computing architecture – Semantic Enabled Service Oriented Architecture
- SEASR addresses the challenges of transforming information into knowledge by constructing the software bridges that are required to move from the unstructured and semi-structured data world to the structured data world

What does this mean for the DH community?

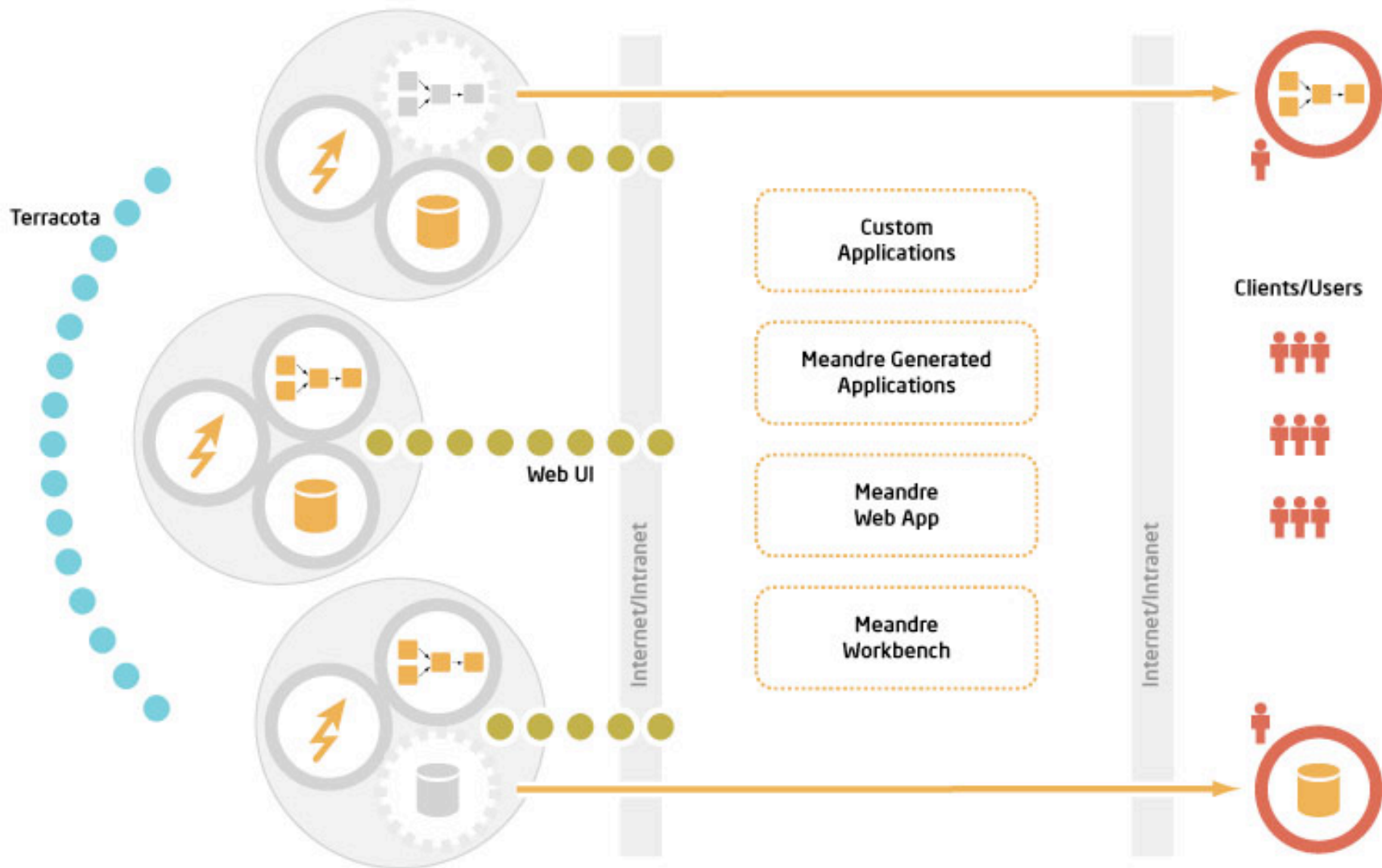
SEASR will:

- help scholars access existing large data stores more readily
- provide scholars with enhanced data synthesis and query analysis
 - from focused data retrieval and data integration
 - to intelligent human-computer interactions for knowledge access
 - to semantic data enrichment
 - to entity and relationship discovery
 - to knowledge discovery and hypothesis generation
- empower collaboration among scholars by enhancing and innovating virtual research environments

Semantically Enabled SOA

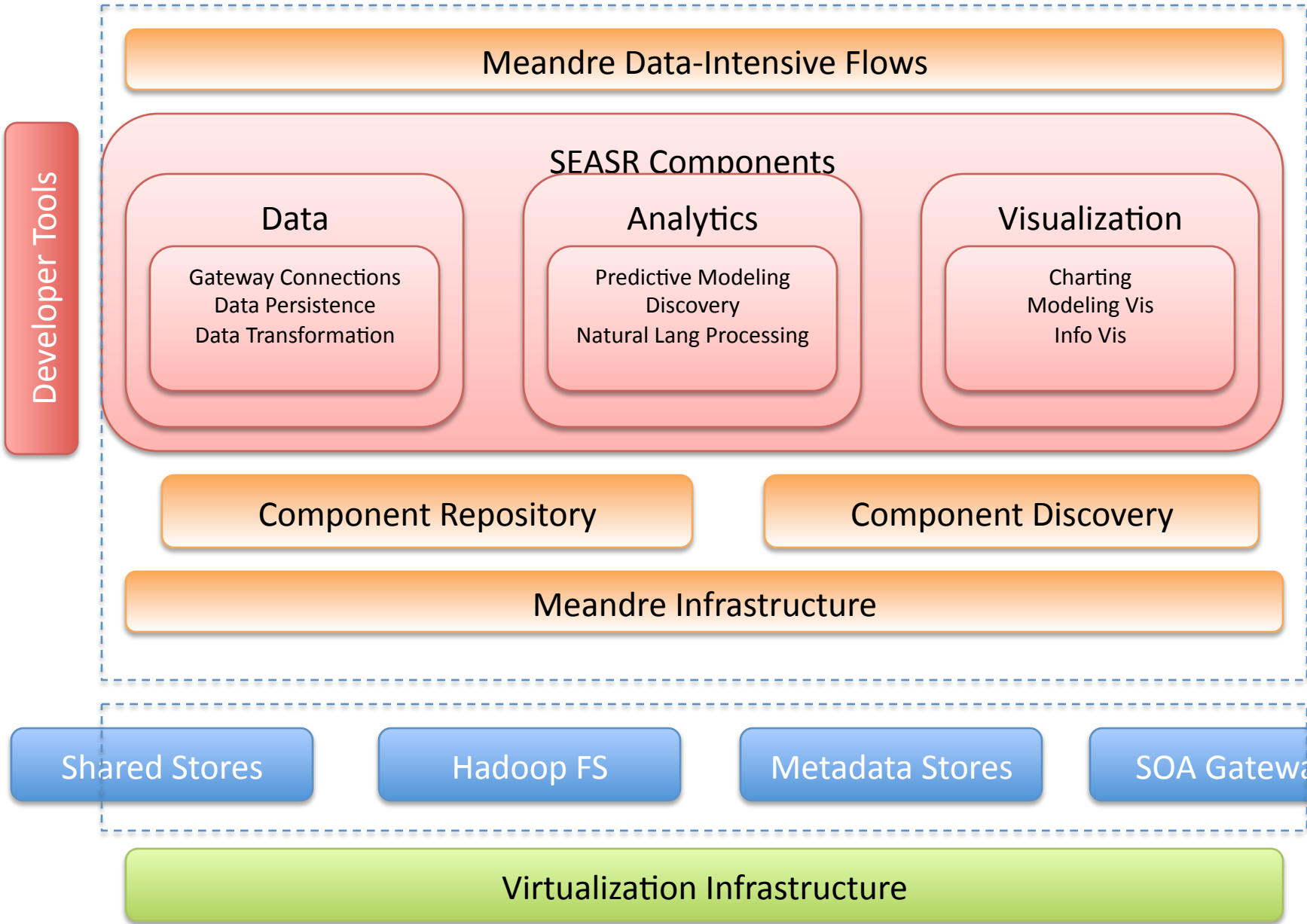


Semantically Enabled SOA 2



Technical Components

- Technical architecture that emphasizes flexibility, scalability, modularity, provides community hub to heterogeneous systems, and reduces path dependence
- Semantic-web driven architecture to standardize interoperability
 - Design for community building and to encourage sharing and participation
 - Data-intensive flows to move from a simple desktop to a large cluster transparently
 - Movable computation. Computation can be transparently shipped to the assets (complying with privacy issues)
 - Quick re-configurability (flows can be adapted and reused in seconds)
 - Build to reuse and cross-fertilization across domains



SEASR Apps: Community Hub

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Discovery Tools: Find a Flow

Keyword Cloud Bubble Stats Connections Stat Generator

login

FEATURED KEYWORD CLOUD BUBBLE STATS CONNECTIONS STATS

Illnesses

Disks colored by Category

Category	Number of Illnesses
Both Meat and Non-	17,384
Produce Dishes	13,133
Vegetables	12,248
Salads	9,844
Egg Dishes	8,989
Fruits	8,668
Poultry Dis...	6,809
Turkey	6,108
Other P...	4,757
Rice/Bea...	4,757
Multi-Ing...	4,629
Chicken	4,630

FEATURED FLOW:
Number of Foodborne Illnesses From 1990-2005
NCSA

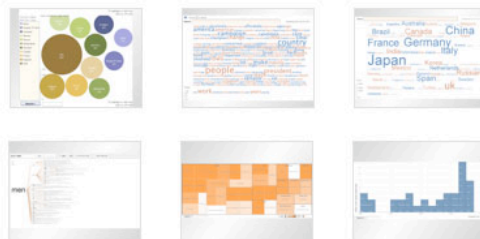
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[VIEW FLOW](#)

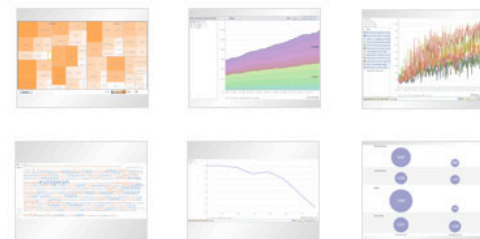
Data sets: [US States](#), [Food Illness](#)
Keywords: [Food](#), [Illness](#), [US](#)

Created On: [December 4, 2007](#)
Created By: [NCSA](#)

RECENTLY ADDED [VIEW ALL](#)



HIGHEST RATED [VIEW ALL](#)



More Community Hub

meandre

EXPLORE

PARTICIPATE

LEARN MORE

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FEATURED

KEYWORD CLOUD

BUBBLE STATS

CONNECTIONS

STATS

alcohol asia cities europe food france germany growth illinois illness milk
minnesota money new york orange juice population state united states
germany growth illinois juice population state US

Orange Juice : United States : Consumption

Sorted by rating | [Sort by date](#)

532 Found



Usage of "men" in Beowulf



nationalities and buldings name



countries in differer year



buildings and nationalities



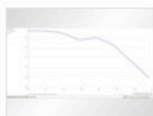
tags and their titles



HK medlemsudvikling 2000-2007



nationalities and buldings name



HK's medlemsudvikling 2000-2007



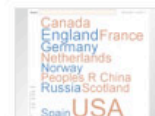
Music Tags



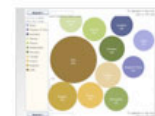
REER



Treemap for Comparisons of italycountries



Tag Cloud of italycountries



Bubble Chart of italycountries



Music Tags

◀ 1 2 3 4 5 6 7 8 9 10 11 12 ... 38 ▶

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Powered by seasr

More Community Hub

seasr

EXPLORE PARTICIPATE LEARN MORE

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my account | logout | logged in as chado

FEATURED KEYWORD CLOUD BUBBLE STATS CONNECTIONS STATS

Find Relationships Between FLOW CREATOR TAG

Go

- Data Analysis Toolbench [Component]
- Analyzing Data [Component]
- Logic Patterns in Website Data [Component]
- SPAQL Queries with Data [Component]
- Data Management (253)
- Data Transformation (197)
- Data Analysis (1932)
- Data Mining (5)
- Data Queries (182)

AUDIO ANALYSIS F

REAL-TIME AUDIO GENRE CLASSIFIER F

GENRE MODEL F

AUDIO GENRE CLASSIFIER F VIEW FLOW

GENRE CLASSIFIER F

AUDIO CLASSIFIER F

NEMA AUDIO MODEL F

MUSIC ANALYSIS VISUALIZATION F

Audio Analysis

Native Bayes

NCSA

Loretta Auvil

NEMA

Real-time Analysis Audio Tagging J48 Decision Tree

Workbench

The screenshot displays the Meandre Workbench interface. On the left, there are panels for 'COMPONENTS AND FLOWS' and 'FAVORITES'. The main area shows a workflow diagram with components: SPARQL Querier, Evaluate, Results to Instances, Weka J48, Web Viz J48 Tree, and Uniform Swap Mutation. Below the diagram is a legend for categories: Data Management, Data Transformation, Computations, Output, Visualization, and Interface. At the bottom, the 'OUTPUT: Simple GA with WebUI Flow' section shows a table of results.

repositories | preferences | logout | logged in as chado

COMPONENTS AND FLOWS

COMPONENTS FLOWS

Go

Advanced Search ▾

SEARCH LIST

RESULTS (1923) Alphabetical

- SPARQL Querier
- Results to Instances
- Weka J48
- Web Viz J48 Tree

FAVORITES

COMPONENTS FLOWS ALL

57 LISTED Alphabetical

- SPARQL Querier
- Results to Instances
- Weka J48
- Web Viz J48 Tree

Simple GA with WebUI

SPARQL Querier Weka J48

WORKBENCH LIST STATS DESCRIPTION PUBLISH

TOOLS

SPARQL Querier Evaluate Results to Instances Weka J48 Web Viz J48 Tree Uniform Swap Mutation

Data Management Data Transformation Computations Output Visualization Interface

VIEW: Category

OUTPUT: Simple GA with WebUI Flow

DEBUG RESULTS

P	DATE	NAME	OUTPUT	STATUS
●	▼ Within the past 24 hours			
●	▶ 2008-01-24 8:29am	Fixed output errors	V F	Running
●	▶ 2008-01-23 10:18pm	Modified search parameters	XML F	Error
●	▼ 2008-01-23 11:49pm	Initial Run	XML F	Completed
		PUBLISH REVERT		
		search rate: 30 date source: google.com		
●	▶ Within 30 Days			

SEASR @ Work - MONK

"literary(esque)" the wee rhino you've been waiting for:
putting out fires, small fires.

advanced search | search

all open tools
current tool

HOME | PROJECTS | SENTIMENTALITY | SEARCH BY EXAMPLE

search by example toolset

1 define workset view text

2 rate sample view text

3 choose options progress indicator

4 show ratings show feature list view text

rate samples of text as examples

	title	date
<input checked="" type="radio"/>	Sue - to be rest of title goes here bhggghghhg	1885
<input type="radio"/>	To be Susan rest of title goes here bhggghghhg	1886
<input checked="" type="radio"/>	Gratitude - rest of title goes here bhggghghhg	1887
<input type="radio"/>	Sue - this rest of title goes here bhggghghhg	1889
<input type="radio"/>	Susan - rest of title goes here bhggghghhg	1889
<input type="radio"/>	I am sick today bhggghghhg	1890
<input checked="" type="radio"/>	We meet / rest of title goes here bhggghghhg	1892
<input type="radio"/>	To lose what rest of title goes here bhggghghhg	1894
<input checked="" type="radio"/>	Dear Sue, rest of title goes here bhggghghhg	1896
<input type="radio"/>	Sue - to be rest of title goes here bhggghghhg	1885
<input checked="" type="radio"/>	To be Susan rest of title goes here bhggghghhg	1886
<input type="radio"/>	Gratitude - rest of title goes here bhggghghhg	1887
<input type="radio"/>	Sue - this rest of title goes here bhggghghhg	1889
<input type="radio"/>	Susan - rest of title goes here bhggghghhg	1889
<input type="radio"/>	I am sick today	1890
<input type="radio"/>	We meet / rest of title goes here bhggghghhg	1892
<input type="radio"/>	Susan - rest of title goes here bhggghghhg	1889
<input type="radio"/>	I am sick today	1890
<input type="radio"/>	We meet / rest of title goes here bhggghghhg	1892

save | save as | continue

Sue, the rest of the text goes here

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Please rate this text: 1 2 3 4 5
false — true

System rating:
false — true

Current ratings:

Gratitude, rest of text goes here

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Please rate this text: 1 2 3 4 5
false — true

System rating:
false — true

Current ratings:

sentimentality
tools

SEASR @ Work – NEMA

Dynamic Visualization of Music Classification Systems Son of Blinkie: Beta v. 0.91

00:24
▶
◀
▬
 00:05 ⏮ ⏪ ⏩ ⏭ m000154 (Click to Select New Song) »
 Status: Audio analysis loaded and playing

1 Genre CART Decision Tree
AUDIO GENRE CLASSIFIER



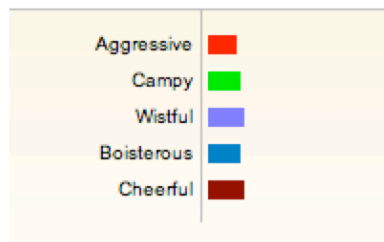
2 Genre J48 Decision Tree
AUDIO GENRE CLASSIFIER



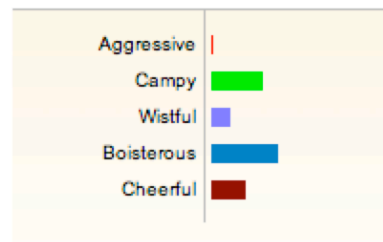
3 Genre Support Vector v2
AUDIO GENRE CLASSIFIER



4 Linear Discriminant
AUDIO MOOD



5 Mood Support Vector v2
AUDIO MOOD



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