



# Disease Data Correlator

533C Final Project Presentation

14<sup>th</sup> December, 2009

by

Shama Rashid

# Problem Domain

- Data Source: Centre for Disease Control

Column	Variable	Field Length
1	_STATE	2
16	IDATE	8
88	_DIABETE2	1
94	_ASTHMA2	2

- State-wise survey data for different diseases (grouped on income, gender, race, age, education etc.)
- Prevalence trend (data trend over time)



# Implementation Choices

- GeoVISTA, GeoViz
- GeoTools library for Java
- Google Visualization API

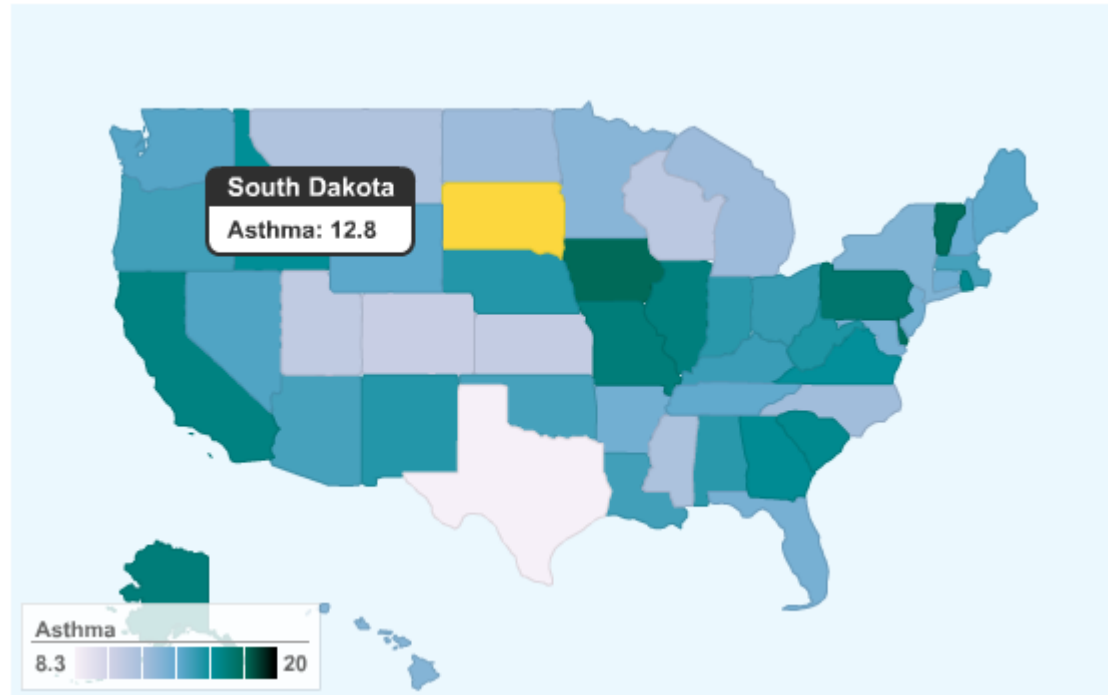
# Implementation Technology

- Google Visualization API

#	API	Application
1	GeoMap	Choropleth Map
2	Table	Data browsers
3	Annotated Time Series	Yearly Trend
4	Area Chart	Details
5	Bar Chart	Details
6	Column Chart	Details
7	Line Chart	Details
8	Visual Query Language	Data from spreadsheet

- Apache Tomcat
- Javascript, HTML, DHTML, AJAX
- Java

# Choropleth Map



- Choropleth map for percentage of people having a particular disease in each state
- No focus color change or background color change options for GeoMap API

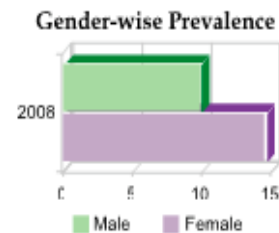
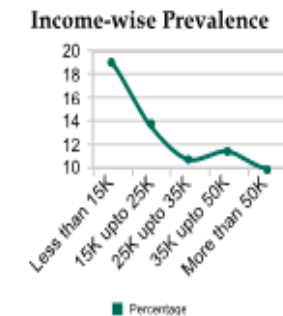
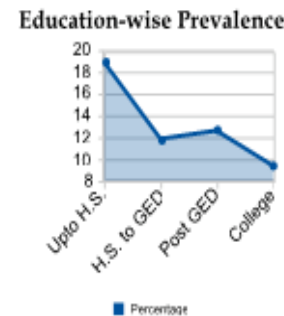
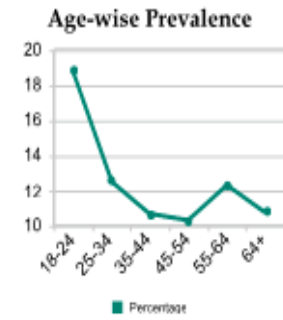
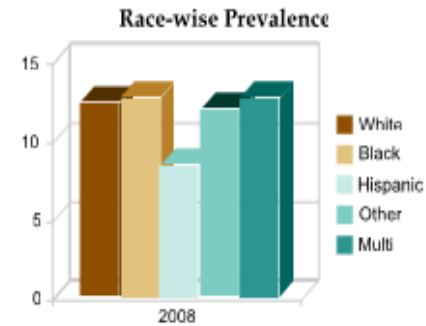
# Details Window

- Charts/Graphs

- Race
- Age-group
- Education level
- Yearly Income
- Gender

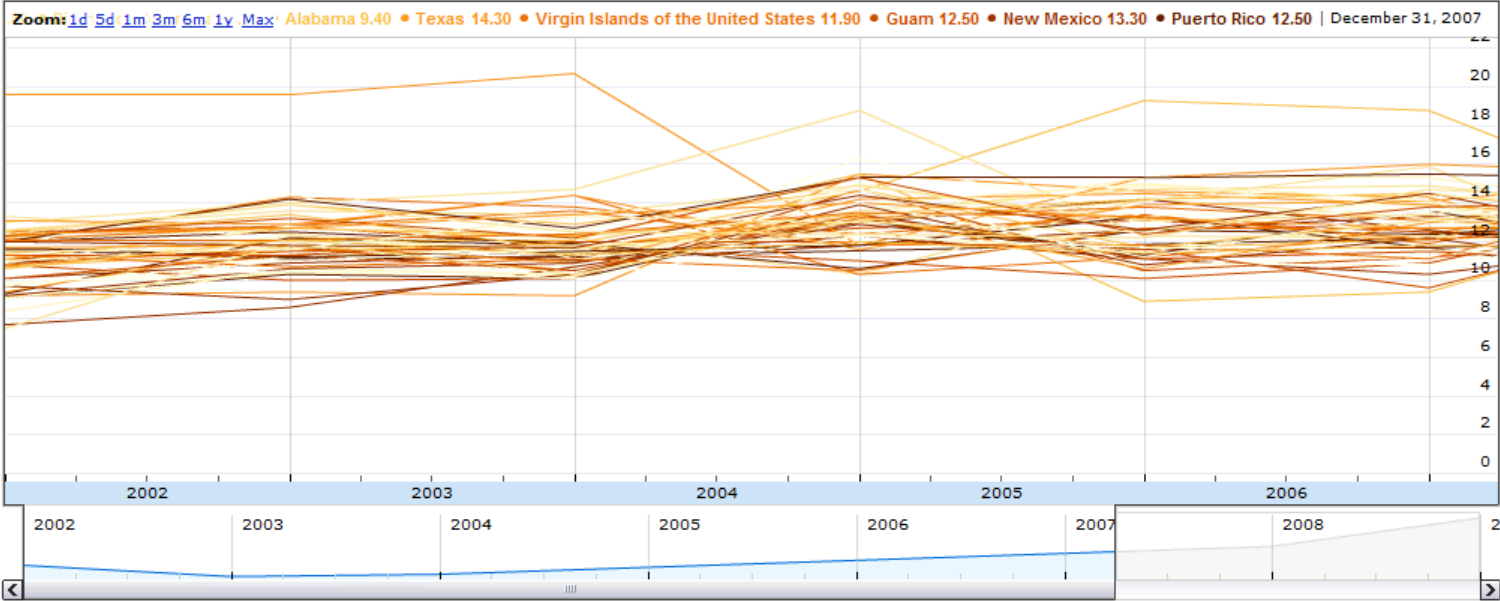
- State-wise data
- Loaded on-click from choropleth map

State Code : AL  
State Name : Alabama



# Yearly Trend Data

- Slider to select data range



# Tabular Data Browser

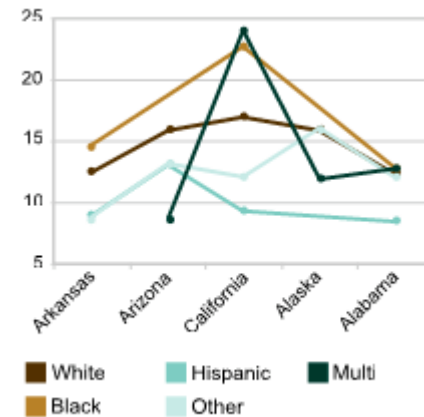
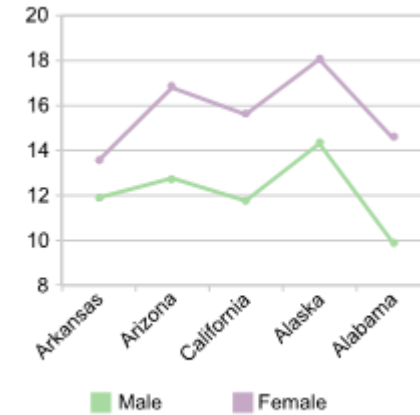
- Sortable
- Filterable

	STATE_NAME	Asthma 2008	Asthma 2007	Asthma 2006	Asthma 2005	Asthma 2004	Asthma 2003	Asthma 2002	Asthma 2001
1	Hawaii	12.3	13.1	13.6	11.2	14	11.6	11	9
2	Delaware	16.1	13.7	14.4	12.5	13	13.3	11.6	11
3	Rhode Island	14.9	14	14.7	12.2	12.4	12.5	13.9	12
4	Connecticut	12.8	11.7	11.8	11.4	12	11.3	12.1	10
5	Kentucky	13.8	12.9	12.7	13.2	14	13.4	12.7	12
6	New Hampshire	13	12.9	12.1	13.3	13.5	12.4	12.1	12
7	Nevada	13.4	14.1	13.8	12.4	15.3	12.2	13.2	12
8	Massachusetts	13.6	11.7	14.5	12.6	14.4	11.7	11.8	
9	Iowa	16.2	15.2	15.5	15.3	15.3	12.7	14.2	
10	Colorado	10.2	10.7	11.6	11.7	12.3	10.1	10.5	9
11	New Jersey	12.7	12	13.1	11.5	12.3	11.8	11.7	
12	Utah	10.5	9.7	15.9	14.1	13.1	10.3	12	7
13	Vermont	16.1	13.9	13.1	11.7	13.1	11.6	13.4	12
14	Arkansas	12.7	13.2	13	10.6	13.3	11.7	11.8	11
15	Wyoming	13.2	12.7	12.7	12.7	10.5	11.1	10.7	11
16	Louisiana	13.7	13.3	9.6	11.6	12	12	11.3	11
17	Wisconsin	10.7	10.2	12.2	10.8	13.9	10.3	9	9



# Correlator

- Why line-chart? – categorical data
- Dimensioning issue for line-chart





# Future Work

- Different charts over choropleth map – extend the thematic mapping API
- Handle other events – data range change etc.
- Add more filter conditions – two or more states
- Handle zoom functions and dynamic layout



# Challenges

- Tool selection
- Data extraction
- Different data and coloring formats for different APIs



# Demo

- <http://localhost:8080/ddc/index.html>

Thank You