

## **Integrated Analytics in Database Management Tool**

### **Client**

David Flammer, Data Verity, Inc. [david@dataverity.net](mailto:david@dataverity.net)

### **Background**

We have a strong desktop web application for preparing and delivering business intelligence reports and dashboards to clients (mostly in the financial industry). The application is separated into two sections, one for managing database tables, and one for graphing data, analyzing data (sums, averages, standard deviations, correlations, least-squares fits, and more advanced regression). We would like to integrate data analysis tools directly into the database management system.

### **Project Goals and Requirements:**

You will use Javascript and HTML5 to build a user interface to analyze data from views of tables within a database management tool. This will include:

- Creating graphs of data (bar, line, scatter, Gantt, etc.)
- Performing descriptive statistics on the data: sum, average, standard deviation, etc.
- Correlation and modeling: least-squares fits, principle component analysis, etc.

Students will learn significant amounts about web programming, in particular Javascript, while becoming acquainted with some state-of-the-art modeling statistical modeling techniques. Clean visualization of data will also be key.

### **Suggested Team Size:**

3 students

**Paid internships are available after Field Session for students that perform well.**

### **Skills/Experience for CSM Students:**

- Javascript/AJAX
- HTML5
- Basic statistics
- More advanced statistical modeling (Principle Component Analysis)