## **Aimsio Programming Test**

## Requirements

The provided CVS dataset contains the time-stamped list of signals received from equipment in the field. Each signal is from a certain piece of equipment in time of a status change.

Import the dataset in a MySQL database. Implement a responsive <u>VAADIN</u> application that <u>visualizes the # of signals over time</u>. <u>Upload your WAR file</u> on the <u>Amazon Elasticbeanstalk</u> and send the URL.

Here's a more in-depth requirement:

- 1. Create an account on aws.amazon.com. Use their free tier to host your application.
- 2. Import data to a MySQL database and host it on Amazon RDS.
- 3. Use mayen to create your VAADIN application.
- 4. Your application must have the following components:
  - a. A <u>Vaadin Chart</u> component: horizontal axis shows the time, vertical axis shows the # of different signals, e.g. Engaged, Active, etc.
  - b. Have a ComboBox to allow the user to select a specific AssetUN or all of them.
  - c. Provide an easy-to-use UI for the user to interact with your chart, e.g.
    - i. Show data in the x-axis based on a resolution (daily, monthly, annually) and allow the user to change resolution. For example, on a monthly resolution, the x-axis must show months and the y-axis must have aggregated signal counts for each month.
    - ii. Your application should be responsive, i.e. adjust itself dynamically based on browser width/height
  - d. Use software patterns of your choice
  - e. You are not allowed to load all data into memory all at once. Your program should construct a query and load data as needed.
- 5. Bonus:
  - a. How would you test this application?

Feel free to make any reasonable assumption about this assignment, innovate and add your personal touches as you see fit.

Please send the url of your hosted application, along with your zipped project to <u>career@aimsio.com</u>.