1. Introduction and Purpose

My entry for the *MicroStrategy World 2013 Dashboard Contest* is a prototype of a ***Student Performance Dashboard***. This dashboard will be part of a new suite of higher education products and services that collect and organize key operational and performance data that deliver actionable metrics and analytics. This new suite of products is known as Apollo's Education-as-a-Service (EaaS) and is referred to as **AES.**

The actual implementation of this dashboard would be used by faculty to show all of the student performance data, for a specific class, on a single screen with the goal for the instructor to immediately visually understand the key performance metrics and take action on them.

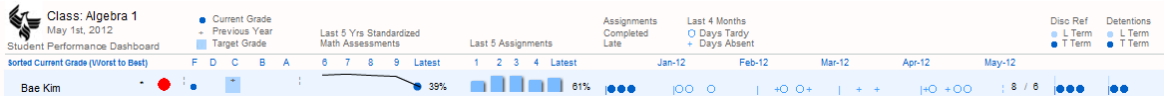
2. How to use the dashboard

The dashboard is broken down into two key sections:

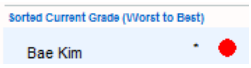
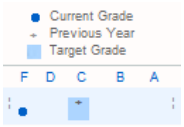
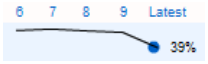
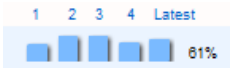
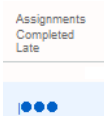
- The section on the left shows all of the key performance metrics for **individual students** where each student's metrics are visualized on a separate row and read left to right.
- The second section on the right shows two math assessment graphs based on **class comparison**. Class comparison consists of
  - this class,
  - another section of this class taught by this instructor,
  - all sections of this class taught at the school,
  - all sections of this class taught throughout the district.

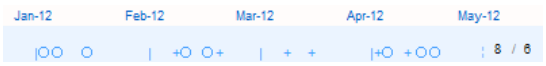
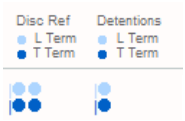
A. Individual Student Analysis

Below is an example of an individual student row for student *Bae Kim*.



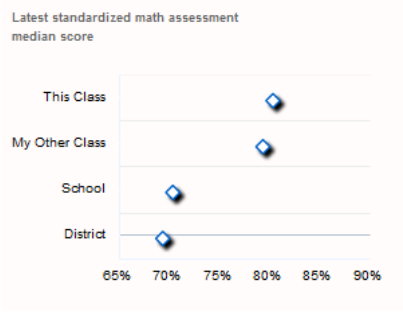
Here is a description of each of the student metrics.

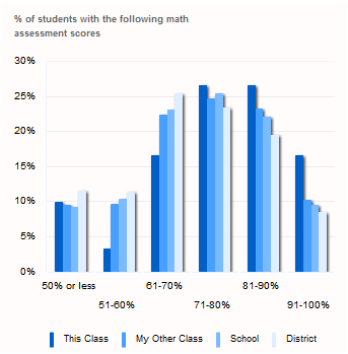
	Students are sorted by their current grade, from worst ("F") to best ("A") so the teacher can view the "at risk" students first. A secondary sort is also performed on the difference from current grade to target grade. The student can also have two different types of indicators: a "*" for no English language proficiency and an "†" if they are in Special Education. A red filled circle alert was added next to the name of those students with an "F" as their current grade to make it easy to spot the students that are most in need of immediate attention.
	This **dot plot** visual shows us how the student is progressing. The "+" shows us their math grade from last year. The blue dot (filled circle) shows us their current math grade. The light blue square shows us what their target grade (goal) is.
	The **Sparkline** shows us the student's last five years math assessment scores. In this example, we see 6th – 10th grade (10th being the latest). The latest score is shown immediately following the Sparkline.
	The **micro column chart** shows us the student's last five assignment scores (the fifth one being the latest). The latest score is shown immediately following the column chart.
	This visual shows how many assignments the student has completed late. Each blue dot (filled circles) represents a late assignment.

	This **flattened scatter chart** visual shows the last four months of the class. Within each month's range, you will see a "○" for days they were tardy and a "+" for days they were absent within that month. This allows the teacher to identify patterns not just for each student, but for the entire class. A teacher would find this pattern highly beneficial, especially when several instances of absences and tardies occur in a short period of time. The total tardies and absences are shown immediately following the visual.
	The behavioral data are the disciplinary referrals and detentions, which again are represented as dots (filled circles), with past term information in a lighter shade and stacked on top of the current term information for quick comparison.

B. Class Comparisons

Below are the two class comparison graphs.





To compare the overall class performance to other classes, schools and districts, I combined the information from the summary data to create two graphs: a **dot graph** (vertical line chart) to show the *Latest Median Assessment Scores* and a **clustered horizontal bar chart** to show *Percentage of Students' Assessment Scores* in percent groups. I chose a dot graph in order to emphasize the variation between the groups, but also to align with the percentage groups of the second graph.