

2014-15 News Releases



NEWS RELEASE

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APS Announces Deep Learning Analytics and Affiliates As Big Data Roundtable Winner *Winning Team Presented with \$10,000 Award*

Today, APS announced that Deep Learning Analytics and Affiliates was named as the winner of the “APS Big Data Roundtable Competition.” APS launched the competition last November to encourage outside experts to analyze data sets to determine how they could be used to drive student achievement to higher levels.

Andy Set, Senior Implementations and Community Manager of the CK-12 Foundation - the official sponsor of the competition - presented a \$10,000 check from CK-12 as part of the award presentation.



About the Competition:

Last November, teams of data scientists, experts and analysts working in various industries were invited to analyze APS achievement data and examine it to determine predictors of student success. APS specifically wanted to know key indicators that would provide early identification of students at risk of dropping out, increase the number of students who earn advanced diplomas, and identify those who could be successful career and technology program students.

APS took extensive measures to protect student identities for all data. In addition, all participants signed an agreement with APS to ensure accountability and confidentiality.

A group of independent data experts, including representatives from the education, business, and the health sectors, selected the winner.

About the Results:

Through secured access to the APS student dataset (masked of the student identities), Deep Learning Analytics and Affiliates developed a predictive model to identify trends, patterns and key attributes for identifying students at risk of dropping out and those who earn an advanced diploma.

Findings from the Big Data Challenge:

Arlington Superintendent, Dr. Pat Murphy, thanked CK-12 and the participants for their support and insights. Murphy explained APS's interest in big data, saying, “Big Data offers us a new frontier to look closely at our practices and reevaluate our work in relationship to our goal of preparing and supporting ALL students to be successful and productive citizens - that is at the heart of public education. The powerful information and tools that we now have at hand can better inform us to be proactive and take action that can change the course of lives. Ultimately, it comes down to judgment, and the better informed we are as educators, the better our hearts and minds will be guided to make good decisions for kids.”

Conclusions from the findings by the Deep Learning Analytics and Affiliates report include:

- Analysis of student data in this study for APS revealed that Attendance, Behavior and Course performance (the ABC's), together with socio-economic status, are the greatest predictors of those students who will drop out and those who will receive an advanced diploma.
- Existing school data collection systems (local, state and federal) must evolve to better inform school district practices and educational policy decisions.
- State presented data coupled with District data can give us greater insight as we have the opportunity to analyze different sets, and
- Raising the level of consistency in the way data are interpreted will bring much greater value to the analysis.

To view the presentation and Executive summary, visit www.apsva.us/bigdata.

About the Winner:

Deep Learning Analytics and Affiliates is a six-member team comprised of the following research and data analysis experts:

- John Kaufhold, Ph.D., Managing Partner and Data Scientist, Deep Learning Analytics
- Aaron Schumacher, Data Scientist, Booz Allen Hamilton
- Diane Murphy, Ph.D., Chair, IT and Management Science Department, Marymount University
- Tommy Shen, Data Science Consultant, The World Bank
- Ajay Deonarine, SAS Analyst/Modeler/Actuary, AIG, New York
- Alec Hubel, Student, University of California, Berkeley

About CK-12 Foundation:

CK-12 is a leading provider of open educational content, CK-12 provides free and fully customizable K-12 educational materials aligned to state curriculum standards and tailored to meet student and teacher needs.

CK-12 Foundation is licensed under Creative Commons Attribution-NonCommercial 3.0 Unported (CC BY-NC 3.0). CK-12 also offers multi-modality learning (read text, interactive learning objects, videos, exercises, lectures, etc.) at the concept-level designed for comprehensive student learning. Its Founder, Executive Director - Neeru Khosla-is an education visionary and global thought leader. More information about CK12 is available at: www.ck12.org.

About Arlington Public Schools:

Arlington Public Schools (APS) educates one of the nation's most diverse and sophisticated student populations –24,000+ Pre-K through grade 12 students come from 111 nations from around the world and speak 100 different languages. APS operates 36 schools and programs. Academic standards are high, and students consistently score well above state and national averages on standardized tests. Over 66% of APS graduates earn an advanced diploma. The on-time graduation for students is at over 90%, and since 2009, the dropout rate has been cut by more than half through the use of new intervention strategies.

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