

Ada's Open Notebook

Fellowship Opportunity

Insight Data Science Fellows Program

Applications Deadline – Oct 26, 2015

Session Begins – January 1, 2016 in New York and California

"An intensive seven week post-doctoral training fellowship bridging the gap between academia and data science"

The Insight Data Engineering Fellows Program is a full-time training fellowship that helps computer scientists and engineers transition to careers in data engineering.

When Insight began in June 2012, the goal

was to help recent graduates from quantitative academic fields break into the field of data science. In addition to emerging as leaders in the data science community, some of our Fellows with more technical backgrounds were hired on (and are now leading) data engineering teams at companies like Facebook, LinkedIn, and Microsoft. As the program grew, it became clear that there was a strong demand for Fellows who could develop data infrastructures using the leading open source technologies like Hadoop and NoSQL databases. At the same time, there was a large community, from both industry and academic programs like computer science and electrical engineering, that have the core engineering skills and were eager to learn these tools. So, in June 2014 we launched the Insight Data Engineering program to help software engineers and recent graduates become leading data engineers at top-tier Silicon Valley tech companies. For more information, please visit <http://insightdatascience.com/>.

Tech Today

UC San Diego Security Researchers Hack a Car and Apply the Brakes Via Text

A serious weak point in vehicle security enables hackers to remotely control a vehicle, according to researchers at the University of California, San Diego (UCSD). The team demonstrated the vulnerability on a Corvette by turning on the windshield wipers, applying the brakes, or even disable them at low speed. The flaw involves the small black dongles that are connected to the onboard diagnostic ports of vehicles to enable insurance companies and fleet operators to track them and collect data such as fuel efficiency and miles driven. The researchers found the dongles could be hacked by sending them short-message-service text messages, which relay commands to the car's internal systems. "We acquired some of these things, reverse-engineered them, and along the way found that they had a whole bunch of security deficiencies," says UCSD professor Stefan Savage. To read further, please visit <http://www.theguardian.com/technology/2015/aug/12/hack-car-brakes-sms-text>.

Education News

Study: Computer Science Not Offered in Schools Because of Cost

According to a new Gallup research study, "Searching for Computer Science: Access and Barriers in U.S. K-12 Education", while students, parents, and teachers value computer science, administrators don't necessarily perceive that they do. The study reports that less than half of administrators say school board members think computer science education is important. Principals and superintendents cite a lack of time devoted to courses that are directly tied to testing requirements, according to Gallup. They also say that a low availability and budget for computer science teachers is another reason

schools don't offer computer science courses. Researchers report that Hispanic students don't have equal access to computers at home. They say that it carries over at school as they use computers less there. The study says that lower-income students and Black students have the least access to computer science learning opportunities at school. To read further, please visit <http://www.kitv.com/marketplace/education/study-computer-science-not-offered-in-schools-because-of-cost/35014878>.

Coding: The Ultimate Equalizer

Coding is how technology, including software, apps and websites, is created. There are thousands of coding languages, such as JavaScript, Python and SQL, and early exposure helps young people understand and interact with the devices that provide the means to shape our technology-driven culture. Coding is valuable in that it teaches problem solving, design and innovation. It is practical in that it creates solutions to immediate challenges. It is creative in that it allows people to imagine and invent with few boundaries. It is liberating in that one can go from knowing code to owning one's own company. It is equalizing in that code is not limited by the stigmas humans readily cling to, such as race, gender, ethnicity, sexual orientation and religion. To read further, please visit http://www.huffingtonpost.com/joel-s-bloom/coding-the-ultimate-equal_1_b_8032318.html.

Coding for Elementary Students: A Growing Trend?

Within the next few years, all preK-12 students in San Francisco public schools will be learning computer science, as I wrote recently. Chicago also has a plan in place for making computer science a core subject starting in kindergarten. The Avondale Elementary school system, a small district outside Phoenix, started teaching all its K-8 students computer programming last year. Smith, who led the coding initiative until this year, wrote in an email that Avondale is the "first primary grades district in AZ (and possibly the U.S.) to teach all students to code as part of their required curriculum." Avondale's students are largely Hispanic and a majority receive free-and-reduced lunch (an indicator of poverty). To read further, please visit http://blogs.edweek.org/edweek/curriculum/2015/08/coding_for_elementary_students_a_growing_trend.html.

Social Media

How Playing Computer Games Can Make the World Safer

BBC News

It is estimated there are five bugs in every thousand lines of code in commercially available software, yet only a small handful of people have the skills to do the mathematical verification process needed to confirm a piece of software is error-free. However, the U.S. Defense Advanced Research Projects Agency (DARPA) has funded a program to find ways of crowdsourcing the software verification problem. One of the solutions the program proposes is to turn the verification problem into puzzle games.

One such game is Binary Fusion, developed by SRI International in partnership with the Air Force Research Laboratory and the University of California, Santa Cruz.

The game presents players with colored balls that represent good and bad values. To read further, please visit <http://www.bbc.com/news/business-33519194>.