THE GRADUATE STUDENT SECTION

The AMS Graduate Student Blog, by and for math graduate students, includes puzzles and a variety of interesting columns. June 2016 posts included these two by undergraduates:

blogs.ams.org/mathgradblog

Nate Silver and the Stylish Statistics of Predicting Elections
by Michael Dimock, Augustana College

Nate Silver is a statistics guru whose claim to fame has come from correctly predicting forty-nine of the fifty states in the 2008 presidential election as well as all thirty-five Senate races. He is the founder and editor-in-chief of the popular website FiveThirtyEight. Extending far beyond major political elections, the website also works with the statistics of sports, science, health, economics, and culture.

Being a mathematics major, I have learned to never blindly trust the statistics that show up in news reports, and Nate Silver is often one of the first to warn others to be wary of statistics presented in the media. A good intro piece to Silver’s statistical style and ability is his [TED Talk] “Does racism affect how you vote?” (www.ted.com/talks/nate_silver_on_race_and_politics)...

OKCupid: The Math Behind Online Dating
By Michalina Malysz, Augustana College

OKCupid is a top online dating website. OKCupid collects data by asking users to answer questions: these questions can range from minuscule subjects like taste in movies or songs to major topics like religion or how many kids the other person desires. In order to calculate compatibility, the computer must find a way to compare the answer to each question, the ideal partner’s answer to each question, and the level of importance of the question against that of someone else’s answers.

It turns out that the percent match actually does have an effect on the likelihood of a message being sent and the odds of a single message turning into a conversation. For example, if person A was told that they were only a 30 percent match with person B (and they were only a 30 percent match), then there’s a 14.2 percent chance that a single message would be sent and about a 10 percent chance that a single message turns into a conversation of four or more messages. However, if person A was told that they are a 90 percent match (even if they are only a 30 percent match), then the odds of sending one message is 16.9 percent, and the odds that the one message turns into exchanging 4 or more is 17 percent.

Michael Dimock recently graduated from Augustana College and is teaching high school mathematics.

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