Chief Google economist talks on data, statistics, and Google tools

Lecture focuses on using Google Trends, Correlate, Surveys

By Anthony Yu

Yesterday afternoon, the Undergraduate Economics Association hosted a lecture by Google’s Chief Economist, Hal R. Varian ’69, on “Predicting the Present with Search Engine Data.” Hal Varian, an MIT alum, taught at UC Berkeley for several decades before becoming Google’s Chief Economist in 2010. He is one of the several influential voices in the emerging field of big data, particularly known for saying in the McKinsey Quarterly that being a statistician would be the “sexy job” in the next decade. I thought attending the lecture would be a great opportunity for me as an economics student.

I arrived at the lecture hall about 10 minutes early, not expecting to see a giant crowd. But by the time 4:30 rolled around, ES1-345 had filled its capacity of 128 with standing room only. Although billed as an undergraduate event, it was clear that most attendees were graduate students eager to learn more about applying “big data” to business. The lecture began with quick remarks from President Rees-Palmer to Mao 14 and a glowing introduction of Varian by economics lecturer Sara F. Ellison, who credited him for inspiring a new generation of information economists.

Varian’s lecture focused on three Google Tools: Trends, Correlate, and Consumer Surveys. He began with light-hearted set of questions: “What day in the week receives the most searches about hangovers?” Apparently, searches about hangovers peak every Sunday with an outage on Jan. 1, eliciting guilty chuckles from the audience. That laughter was even more pronounced when Varian highlighted that searches about vodka peak a day before searching hangovers. He presented other statistics, including the peak in the search term “Civil war.”

Lecture notes

By anthony Yu

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Family believes India rape suspect was killed

By Heather Timmons

NEW DELHI — The family of a suspect in a fatal gang rape here last December who was found dead Monday morning in his jail cell said they believed he was killed. The case had set of uproar across India.

The man, Ram Singh, was accused of being the driver of a bus in which a 23-year-old woman was beaten and raped. The woman suffered severe internal injuries from being sexually assaulted with an iron rod. Singh was found at 5:45 a.m. hanging from a bedsheet rope suspended from a ceiling, jail officials said.

An investigation was under way, the officials said.

“Is it a major lapse in security? Certainly it is not a small incident,” India’s home minister, Sushilkumar Shinde, said at a news conference in New Delhi.

But Singh’s family members and his lawyer said he would not have been able to tie a noose, because his right arm had been seriously damaged in a bus accident. In addition, they said, he shared his cell in the Tihar prison complex with several inmates, making it difficult to believe he could have hanged himself without being noticed.

“Surely there is foul play,” the lawyer, VK Anand, said.

There were no circumstances for committing suicide. His mental state was stable, the trial was going well, he was meeting with his family. I can’t understand why he would commit suicide,” Singh’s family members said Singh had been abused in jail.

“It is not suicide, he had been hanged by the police,” Singh’s father, Mangal Singh, said in an interview. He said that his son had told him on Friday that the police were beating him in jail and that he was being pressured to change his lawyer.

Earlier Monday, the father told the television channel NewsX that Ram Singh had said that other inmates had begged him.

Singh’s brother, Moshah, is one of the four other men accused in the case, which is being tried in a special “fast track” court in South Delhi set up for sexual assault cases. The creation of such courts was a direct result of the uproar over the fatal rape in December, as thousands of people across India, long angered by selective law enforcement and endemic corruption, vented their outrage over failures in preventing and prosecuting crimes against women.

A sixth defendant, a teenager, is being tried as a juvenile. The four face 23 charges, including murder — which could carry the death penalty — rape, and robbery.

Singh, a 41-year-old who used to transport schoolchildren in the bus, which later became the site of the attack, was the first suspect the police apprehended after the attack was reported.

His confession to the police led them to the others, who were arrested and helped officers piece together what had happened that night.

According to the police charge sheet, a group of drunken men, look- ing for victims to harass, tricked the young woman and a male friend into getting on the bus, attacked them, and then stripped off their clothes and left them on a highway.

By Dan Balilty

For Hungary, still seeking national accord on what constitutes democracy, and for Europe, still uneasy about how to treat governments deemed to have strayed from European Union norms, Monday produced a symbolic moment in the annals of protecting civil rights.

On a state visit to Germany, President Janos Ader of Hungary visited a prison in Berlin where East Germany’s dreaded secret police, the Stasi, held thousands of political prisoners, including some of the hardest critics of the now defunct Communist regime.

Back in Hungary, lawmakers from Prime Minister Viktor Orban’s Fidesz party and its small ally, the Christian Democrats, passed a lengthy amendment to the constitution that critics, including human rights activists, the Council of Europe, the EU and the United States, fear could undermine the judiciary, silence criticism, and threaten the checks and balances of democratic government.

The laws are not new. North Korea, for example, has put communism far behind it, though it remains an authoritarian regime in the sense that it resists an independent judiciary or constraints on power.

While even the government’s state secretary, acknowledged that Hungary, an EU member, has put communism behind it, he added that it wants to continue to protect the city’s freedom by keeping endless, tiresome rules and regulations.

The passing of the amendment comes amid growing concerns that the center-right government of Or- ban, which has a two-thirds ma- jority in Parliament and came to power in 2010, is trying to tighten its grip, including in the judiciary, the media, the central bank, edu- cation, and even cultural life. It has laid bare the limits of the European Union in calling to account mem- ber states it fears have transgressed its democratic norms.

Hedge fund manager found and jailed on fraud charges

FRANKFURT, Germany — Florian Homm, a flamboyant former hedge fund manager who spent the last five years in hiding, was arrested Friday in Italy and faced extradition to the United States on securities fraud charges, the FBI said.

Italian police arrested Homm, 53, at the Utahi Gallery in Florence, the FBI said. He was accused of defrauding investors of at least $200 million, the FBI said. The most serious of the four felony charges carry maximum sentences of 25 years in prison.

Homm was one of Germany’s best-known financiers before he lost his fortune in a series of highly leveraged mergers and acquisitions of German hedges, Absolute Capital Management Holdings, was collapsing.

Until then, Homm had been a symbol of predatory capitalism, the bundesbank and German newspapers' sweetheart. When the 1990s financial crisis forced him to resign at his company, Dresdner Kleinwort, in 2004, he bought Bavaria's country's largest bank, then fled to Switzerland.

Homm seemed to relish his role as the archetypal German businessman who had been a symbol of predatory capitalism in Germany. In 2004, he bought 26 percent of Borussia Dortmund, a beloved, but nearly bankrupt soccer team, and forced management changes. Homm seemed to relish his role — appearing on German talk shows or posing for photographs in front of his villa on the Spanish island of Majorca.

Several European countries, including Italy and France, had been trying for years to extradite the 46-year-old, but Homm had eluded them. Italian police said they had been tracking him for months and had arrested him based on an Italian arrest warrant.

Italian police said they had searched Homm’s villa on the island of Majorca after receiving information from the FBI. Police said that Homm, who had been wanted by the FBI since 2006, had fled Germany with at least $200 million.
North Korea says it has nullified 1953 armistice

By Choi Sang-hun
The New York Times

SEOUL, South Korea — North Korea had blocked a way to bypass the Internet that it renewed last week amid rising tensions with South Korea. The conflict comes as the United States and South Korea are in the midst of a months-long joint military drills, which started on March 1, and on Monday they began another. The drills, which South Korean officials said involved bringing 2,500 troops to the border, were intended to show up a ring of suspicion among its impoverished neighbors, North Korea said it was an unusually vigorous military drill of its own, South Korean defense officials said.

However, there were no signs of hostility along the border between the two Koreas. South Korean officials said they were increasing their vigilance amid fears that North Korea might use the U.S.-South Korean military drills and a fresh round of U.N. sanctions as an excuse to create an armed skirmish against the South.

Technology experts strongly with a North Korean modernization, the South’s new president, Park Geun-hye, said on Monday. "We encountered the Google and Facebook phenomena. "

By Ismail Khan and Declan Walsh
The New York Times

PESHAWAR, Pakistan — Two people suspected of being militants were killed on Monday morning in the volatile North Waziristan tribal region of Pakistan, Pakistani officials said, in the latest of a series of attacks in the area.

Two Pakistani officials, one in Peshawar and another in the tribal belt, said that missiles fired from a drone operated by the CIA hit the two on the way to the tribal village Degan, about 20 miles from Mian Shah, the main town in North Waziristan.

"Details are sketchy. We don’t know the identity of those killed, and our local contacts say the bodies were unrecognized and being buried. But the official in Peshawar said, speaking on condition of anonymity, "We don’t know if they were locals or foreign militants."

It is the first known strike by a drone in North Waziristan, where people said that military forces have been killed was on horseback. There were some reports that three people were killed in the attack.

"We want to go to Pakistan" by Ahmad Shah confirmed that two militants on a motorcycle had been killed in a drone strike. "I cannot confirm that their nationality and group affiliation were confirmed by our official in the tribal belt said he onhorseback."

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The timing and nature of the previous two reported strikes in Waziristan have become a matter of controversy between Pakistan and the United States.

Last week, U.S. officials denied any involvement in two strikes that Pakistan officials and the media had reported as CIA drone attacks. A Pakistani official in Peshawar said, speaking on condition of anonymity, "We don’t know if they were locals or foreign militants."

The last drone attack that was recognized by both Pakistan and the United States, albeit unoffi- cially, was on Jan. 10.

Eating the bears, a poem by Charles Baudelaire, "Alice has returned from behind the looking-glass. Details later."

"We're not making the most use of things that we know work well. "

The explosion of cultural diversity in the U.S. is expected to grow further as search barges return to Shanghai.

Photographs of the carcasses floating in the river were circulat- ing widely on the Internet. One photograph on the website of a Chinese newspaper showed several blue uniformed lifting carcasses from Hengqiao Creek with long handles. An accompanying report, citing a Shanghai news website, said the first carcasses were discovered Thursday near a water treatment plant in an area that is heavily industrialized. Their numbers increased quickly over the weekend, and the tally is expected to grow further as search barges return to Shanghai. An official at the waterworks, was cited as saying the group was checking the water hourly."

Just out a speech in a president Bush's national security adviser, Thomas E. Donilon, present the first direct response by the White House to a raft of attacks on U.S. computer networks, saying that they were coor- dinated with the People’s Liberation Army.

"I don’t want to talk about their serious con- cerns about sophisticated, targeted theft of confidential busi- ness information and proprietary technologies through cyber- espionage," Donilon said in remarks prepared for delivery to the Asia Society in New York.

He also announced that the Treasury Department would impose sanctions on a North Korean bank that specialists in foreign policy networks — raising up the pressure on the North Korean government on the day that Pyongyang announced it was no longer by the 1953 armistice that halted the Korean War.

—Mark Landler, The New York Times

Ukrainian blogger escapes her Syrian captors

MOSCOW — A Ukrainian blogger and journalist captured by a Syrian rebel group some five months ago announced that she had escaped her captors on Monday following a dramatic escape.

She said she had been held by the Free Syrian Army, which has been engaged in a civil war since March 2011.

"Your Alice has returned from behind the looking-glass. Details later."

—Ellen Barry, The New York Times

Thousands of dead pigs found in Chinese river

BEIJING — More than 2,800 dead pigs have been found in a major river that flows through Shanghai, igniting fears among city residents of contaminated tap water, according to state news media.

Officials were trying to determine who dumped the car- cases into the river, the Huangpu, which slices through the heart of Shanghai. Some reports blamed farmers. Officials were seeking to track the source of the pigs from marks on their ears, and an inquiry found that more than 170 homes and two churches were burned. The attack, which involved several thousand people, was spurred by accusations of blasphemy against a Christian sanitation worker earlier in that week.

Cancer specialists around the country say the main reason for the increased cases is that too many women are treated by doctors and hospitals that see few cases of the disease and lack expertise in the poor care is that most women are treated by doctors and hospitals that see few cases of the disease and lack expertise in the treatment. Girls that see few cases of the disease and lack expertise in the treatment.

"U.S. businesses are speaking out about their serious con- cerns about the health impact of our waste on water supplies last year, and thousands of trucks are being used to bring the waste to New York."

The Virginia-born, now a South Korean citizen, was declared dead in a Seoul hospital on Monday.

"We’re not making the most use of things that we know work well."

—Denise Grady, The New York Times

Ovarian cancer study finds widespread flaws in treatment

Most women with ovarian cancer receive inadequate care and miss out on treatments that could add a year to their lives, a new study shows.

The results highlight what many experts say is a neglected problem: widespread, persistent flaws in the care of women with the deadly disease, which kills 15,000 a year in the U.S. and is treat- ed with chemotherapy, radiation and surgery.

"If we could just make sure that women get to the people who are trained to take care of them, the impact would be much greater," said Dr. Robert B. Bristow, the director of gynecologic oncology at the National Cancer Institute, which published a study this year that was based on the new study presented on Monday at a meeting of the Society of Gynecologic Oncology in Los Angeles.

Dr. Barbara A. Goff, a professor of gynecologic oncology at the University of Washington in Seattle, whom the said ovarian cancer care was clear: "We’re not making the most use of things that we know work well."

Iran blocks way to bypass Internet filtering system

By Thomas Erdbrink
The New York Times

TEHRAN, Iran — Iran’s power- ful Ministry of Information and Communications Technology has blocked a way for citizens to use software used by millions of Iranians to bypass Internet filtering, setting up a new system for gaining access to information online.

Iranian authorities say that Citrix Software, a company that has software used by millions of Iranians to bypass Internet filtering, was successfully closed off by the ministry, making it difficult for users to access it. "We’re not making the most use of things that we know work well."

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Encouraging students to pursue STEM
High schools need to do more

By Ryan Normand

Did you know that only six percent of high school seniors will get a bachelor’s degree in a science, technology, engineering, or math (STEM) field? At the same time, while many economic sectors are stagnant, STEM job openings will likely skyrocket over the next several decades. So while many are still looking for work, the U.S. is not going to be able to fill those openings. While only six percent of U.S. graduates have a degree in a STEM field, 97 percent of Chinese graduates do. There is no question that the United States is falling behind when it comes to STEM education. Why are our students so reluctant to pursue these careers, and what can we do to fix the problem?

While we are able to track nationally how many students earn STEM degrees, most high schools have no way of knowing how their individual graduates are doing. Unfortunately, our understanding of the problem is too weak. It may seem that gaining a degree by high school is something that many high schools have a high rate of majoring among their graduates to do that. We can then compare their methods and gain some insight into what might encourage students to pursue STEM degrees. While we are able to track nationally how many students earn STEM degrees, most high schools do not have any way of knowing how their individual graduates are doing. Many high schools’ knowledge of their students’ performance ends when those students walk across the graduation stage.

Such a problem extends beyond purely the issue of STEM, with the new focus of graduating students from high school who are “college and career ready,” the only metric we have to measure is that often how many students are going to college. This says nothing about how ready students are for higher education. The truly valuable information comes after students begin their post-secondary careers. How many students drop out of college? How many graduate within four years? Five years? How many switch from a STEM field to a different area? How many go on to graduate school? How many manage to keep a job? Do they move on to college? All of these questions have answers at a national level, but few high schools are monitoring the answers to these questions at a local level.

High schools need to do a better job of monitoring this information. Imagine how powerful it would be for every high school in the country to have data on how well their students are doing after graduation. With the rise of the internet and the rapid integration of technology into the classroom, there is no longer any excuse for not monitoring the progress of high school graduates at a local level. One method of doing this would be to integrate such feedback into high school alumni networks. High school alumni networks can be a powerful tool to inform a student when considering future options. Such a network can be used by the faculty if you, say, a calculus teacher wants to know where a former student is now. How can faculty come in and talk about how he uses calculus in his job?

OPINION POLICY

Editorials are the official opinion of The Tech. They are written by the Editorial Board, which consists of the current Editor in Chief Anne Cat. Managing Editor Ian M. Goroshidser ’15, and Executive Editor Deborah Chen ’14.

Letters to the editor are written by individuals and represent the opinion of the author, not necessarily that of The Tech. All submissions are encouraged and should be sent to letters@tech.mit.edu. Hard copy submissions should be addressed to The Tech, P.O. Box 375028, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the publication date.

Letters, columns, and cartoons must bear the authors’ signatures, addresses, and phone numbers. Unsigned letters will not be accepted. The Tech reserves the right to edit and condense letters, shorter letters will be given higher priority. Once submitted, all letters become property of The Tech, and they will not be returned. Letters may be posted on The Tech’s Web site and/or printed in other forms or media now known or later invented. To be considered for publication, all the letters received.

To reach us:
The Tech’s telephone number is (617) 253-1541. Email is the easiest way to reach any member of our staff. If you are unsure whom to contact, send mail to general@tech.mit.edu, and it will be directed to the appropriate person. You can reach the editors in chief by emailing oic@tech.mit.edu. Please send press releases, requests for coverage, and emails that call for correction to news@tech.mit.edu. Letters to the editor should be sent to letters@tech.mit.edu. The Tech can be found on the World Wide Web at http://tech.mit.edu.
Fill in the blank:

Dining at MIT is ________.

The Tech will be running a survey about dining at MIT soon. Send suggestions or topics you want covered to dining@tt.mit.edu.
Saturday Stumper by Lester Ruff
Solution, page 12

ACROSS
1 Makes into bread
7 Where Michael J. Fox is from
13 Nest-egg option
14 Trickster’s activity
16 Breadmaker, perhaps
17 Where Michael J. Fox is from
18 Milling by-product
19 Memo header, maybe
21 Move around
22 Front of overalls
23 Square one, so to speak
27 Fire starter
28 “Yes”
29 It may be over your head
30 Pass easily
31 Server’s suggestion
33 Late
35 Hard to see
36 What Freud called das Ich
37 Rug rats
39 Open
41 Filled (with)
45 Essence of many a punch line
46 Comparatively lively
48 __ mineralé
49 Distress
50 Baby Ruth sister brand
51 Soothe, perhaps
52 Mogul
54 Anagram of 35 Across
55 Word after country or sea
56 Decoy
59 Ancient angler
62 Commissiveive comment
63 Buyout hopesful
64 Paper
65 Boots

DOWN
1 Place to say “Olé!”
2 “Olé”
3 Area a guard might cover
4 __ Way (Sinatra biography)
5 Golden
6 Wells Fargo’s HQ
7 Drink with ginger
8 MapQuest owner
9 Apprehend
10 Ground things
11 Squeeze
12 Ohio college
13 Some wedding officials
14 January birthstone
22 Squawk
23 Pastoral Symphony movement
24 It can go 0-to-60 in three seconds
25 Host’s hire
26 Rubi’s homeland
32 When e.e. cummings was interned
34 Marker
35 Plenty of nothing
36 Subway alternative
39 Open
40 Mercury and Saturn
41 Great delicacy
42 Quiz Show sponsor
43 Trucking companies
44 White truffles, for example
47 Backed bench
53 Infame
55 Dispense, with “out”
57 Runner who ran the 2012 Olympics
58 It means “most”
60 Party dress
61 Dickensian narrator
Least Action Principle
by Amanda Aparicio

“WE NEED TO TALK”
WHAT IT CAN MEAN:
A) YOU’RE FIRED.
B) I FORGOT WHAT YOUR PROJECT IS ABOUT. CAN YOU REMIND ME?
C) I HAVE A TRIVIAL REQUEST THAT I’M TOO EMBARRASSED TO WRITE IN AN EMAIL.

Techdoku
Solution, page 12

<table>
<thead>
<tr>
<th>2−</th>
<th>4x</th>
<th>6x</th>
<th>10x</th>
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</thead>
<tbody>
<tr>
<td>12x</td>
<td>60x</td>
<td>24x</td>
<td></td>
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<td>10x</td>
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</tr>
<tr>
<td>12x</td>
<td>12x</td>
<td>8x</td>
<td></td>
</tr>
</tbody>
</table>

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

Sudoku
Solution, page 12

8 | 4 | 9 | 1 |
---|---|---|---|
7 | 1 | 5 | 3 |
1 | 4 | 2 | 6 |
1 | 4 | 2 | 6 |
8 | 7 | 3 | 1 |
6 | 7 | 4 | 9 |
2 | 8 | 7 | 1 |

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.
RELAY FOR LIFE

The American Cancer Society Relay For Life is an overnight fundraising event that brings together 3.5 million people across the country, to raise cancer awareness and funds for research, advocacy efforts, education, and patient service programs. It serves as a celebration for cancer survivors, a memorial for loved ones lost, and a community rally to fight cancer. The MIT-Wellesley Relay for Life took place this Saturday at Johnson Track from 6 p.m. to 6 a.m. Sunday morning, with team activities and performances by MIT and Wellesley student groups, as well as a celebration of those affected by cancer — survivors, caretakers, friends, family, and individuals currently fighting the disease.
Imagine this: you have a brilliant idea, a question about something you have never discussed or even thought of before. You have just started a new way to approach the cosmos, and you're finding new ways to think about new ideas. The experience is exhilarating. It's what makes us human—what makes us intelligent life forms.

By Emily A. Moberg

WEDNESDAY

(8:00 a.m. – 9:00 a.m.) Irish Fest — Student Center Lobby

(9:00 a.m. – 9:30 a.m.) Innovation Series Event: Big Ideas, Big Solutions — How can we solve more big problems? — 32-123

THURSDAY

(7:00 p.m. – 7:30 p.m.) Beyond the 3/11 Tsukishima disaster — talks and reception (RSVP at http://go.microsoft/DETuJ) — V20-407

FRIDAY

(11:30 a.m. – 1:00 p.m.) Johnny Cupcakes/MIT Retail Entrepreneurship & Building a Cult Brand — E51-149

(7:00 p.m. – 10:00 p.m.) USC Shows Beasts of the Southern Wild — 26-100

(8:00 p.m. – 9:00 p.m.) Roadkill Buffet Presents: The Sequester Cut The Pope's Budget By One Pope — 6-120

SATURDAY

(7:00 p.m. – 7:30 p.m.) Edgerton Ions of March Party, American Family — NW-10

(8:00 p.m. – 10:00 p.m.) MIT Wind Ensemble Concert with Don Byron — Kresge Auditorium

SUNDAY

(4:00 p.m. – 6:00 p.m.) Pinat Yukiico Sekino in recital — 14W-111

(6:00 p.m. – 9:00 p.m.) MIT Muslim Students' Association goodwell baking — McCormick Country Kitchen

Send your campus events to events@tech.mit.edu.
Varian, from Page 1

which generally peaks “three days before the term paper is due.”

Once the audience was thoroughly entertained, he transitioned to a more practical application of Google Tools. Varian showed that queries about unemployment claims are a good indicator of the unemployment rate and when a recession begins and ends. Google’s large data set from searches allows people to build better predictive models that take into account the relationships between different variables.

Varian highlighted how easy it is to collect data with Google Consumer Surveys, noting that he started a consumer survey before dinner about the minimum wage, and after dessert, there were about 700 responses. He claimed that the next best alternative to running an online survey would be 40 times more expensive. With Google’s detailed search data, more accurate regressions can be drawn.

In addition, Varian showed that queries about unemployment claims are a good indicator of the unemployment rate and when a recession begins and ends. Google’s large data set from searches allows people to build better predictive models that take into account the relationships between different variables. With a linear model, it is “hard to catch the turning point,” but with Google’s detailed search data, more accurate regressions can be drawn.

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The next best alternative to an online survey would be 40 times more expensive. In addition, with Google’s survey tools, one can see how word changes in the phrasing of questions affect responses. With these data easily accessible, it “de-mocratizes the whole profession” and has large implications for both businesses and social sciences.

My favorite part of his lecture was when he briefly touched upon how the consumer sentiment, a survey very helpful to economists during the past recession, could be better interpreted. Varian said, “As economists, we don’t quite know what the best correlates will be. It’s not obvious.” Indeed, the consumer sentiment survey contains “fat data” which has many predictors but few observations. Varian showed how Google’s private data on queries related to financial planning, investing, business news, utilities, and search engines helped make more sense of the raw data of consumer sentiment. It was amazing to see the regression line on each successive lecture slide become better fitted towards the data points as Google’s search data was added.

With more data, better predictive models can be built.

After 40 minutes speaking, Varian wrapped up his presentation by concluding that “the challenge that is facing the economics profession is how do we combine public and private data in a useful way.” Needless to say, most of the attendees were sold on his presentation about big data.

For the last 20 minutes, Varian took questions. Most of the questions that were raised concerned the possibilities of big data and the “how” behind Google’s business. Some even inquired about the prices that Google charges to use its tools. I eventually got up the courage to ask whether or not there was a particular set of data he particularly enjoyed researching. Varian simply couldn’t decide, stating “there’s a lot of things you can look at that are both interesting and instructive.” He suggested that he thought looking at trends across countries was a more intriguing topic.

The lecture was a great opportunity for students interested in economics, information, and business. His presentation highlighted the bright future of big data and illuminated what it means to be better at forecasting the future.
The Tech Tuesday, March 12, 2013

Celebrate PI DAY at the MIT Coop with free Pizza Pie

3.14
11:00am to 1:59pm

Free Pi Day Giveaways! Free Pizza Pie starting at noon! Pi Day merchandise on sale!

MIT-ISN/Army Labs 2013 Student Summer Internship Program

Program Summary
MIT undergraduate students conduct scientific and engineering research at Army Science and Technology Centers under the direction of Army Scientists, from June to August. The Army host and student determine the exact starting and finishing dates.

Professional Benefits
• Gain valuable research experience
• Build new professional relationships
• Access world-class research facilities
• Contribute to a team that is providing new, life-saving technologies

Disciplines of Interest and Project Content
• Most areas of science and engineering
• The Army Lab Host determines the project content and subject matter. The projects can involve basic research, applied research, or both and do not need to be related to the lab mission or to nanotechnology.

To view internship opportunities and learn more about this program, please register at the website:
https://isn.mit.edu/internship/index.php

If you have questions about this program, or experience difficulty using the website, please contact Marlisha McDaniels, at the ISN: mmcd@mit.edu, 617.324.4700.

3
3
3
3

Swartz investigation updates

Swartz, from Page 1

a three, four, potentially five month range. "That is what the government said specifically to Mr. Swartz, "Those offers were rejected." Connin did not give up, pressing Holder further: "Does it strike you as odd that the government would indict someone for crimes that would carry penalties for up to 35 years in prison and million dollar fines, and then offer him a three of four month prison sentence?"

"No, I don't look at what necessarily was charged as much as what was offered in terms of how the case might've been re-solved," replied Holder.

In January, Swartz lawyer Eliot Peters told the Boston Globe that the six-month plea deal was rejected because he and Swartz wanted a trial where prosecutors would have to publicly jus-tify the charges.

MIT has been staying si-lent on the Swartz prosecution, pending the completion of Prof. Hal Abelson PhD '73's analysis of the Institute's involvement in the situation, which started when Swartz first began downloading JSTOR articles in Sep-tember 2008. Swartz committed suicide in New York City on Jan. 11.

—Ethan A. Solomon

Innovation in surgery, optogenetics

Prizes, from Page 1

in brain and cognitive sciences and the Media Lab, won the 2013 Gote Lundbeck European Brain Research Prize yesterday. The award is one million Euros.

The prize is given by the Lundbeck Foundation of Den-mark for outstanding brain research.

Boyden received his work for pioneering optogenetics, a technology he developed to control brain activity using light.

Lemelson Prize

Nikolaus Beggs, a PhD student in Mechanical Engineering, just won the Lemelson-MIT student prize for his work making surgical procedures less invasive. He will receive $30,000 to continue his work in “puncture access procedures.”

Many minimally invasive surgeries begin with a small puncture made by the surgeon. Despite these incisions being minimal, they often plunge through more tissue than need-ed—a result of the surgeon’s human reaction time. Beggs has invented a force-sensing device with a blade that retracts within 1/100 of a second after passing through skin tissue. This cre-ation minimizes damage, and can scale to a variety of medical puncture devices.

Beggs shares the Lemelson-MIT Collegiate Student Prize with two students from the University of Illinois at Urbana-Champaign and Rensselaer Poly-technic Institute, respectively.

—Jessica J. Pourian

Solution to Sudoku

from page 7

3 8 2 5 6 4 9 7 1
9 7 4 8 1 3 5 6 2
6 1 5 9 2 7 4 3 8
1 4 9 2 7 8 3 5 6
7 5 6 3 9 1 8 2 4
8 2 3 4 5 6 1 9 7
5 6 7 1 8 9 2 4 3
4 9 1 6 3 2 7 8 5
2 3 8 7 4 5 6 1 9

Solution to Techdoku

from page 7

5 3 4 1 6 2
2 6 1 4 3 5
3 1 2 5 4 6
4 2 3 6 5 1
6 4 5 2 1 3
1 5 6 3 2 4

Solution to Crossword

from page 7

CASHES CANADA
ROTHER AMOKING
ARTILLER ALBERT
BRAN FYTBIR
HOD CHAPEAU
ACE BAYWEN ATNIGHT
SOUTH FRAUGHT
ALL OHENRY
RUB SIGHT
ENTICIES SITER
ROGLES SIGHT
SHEETS EXPLORE

Three females attending summer courses at MIT want to rent a furnished apartment in Cambridge from June 29th to August 3rd.

If you have anything, contact us:
mariauzermeno@hotmail.com
Faculty responses revealed a gap between expectations in academia, where privacy is often seen as integral to academic freedom, and the corporate world, in which employees are often told to assume that workplace emails are not private. Some professors wondered aloud whether they had been naïve to think that things would be different at a university, and said they were forced to re-examine assumptions about confidentiality.

“It’s disturbing because I don’t know what it means about whether they could look at my own email,” said Oliver Hart, an economics professor. “We need to have a discussion and a better understanding of the policy.”

Hart and other professors said the searches would prompt them to conduct more business through private email accounts.

The episode has angered faculty members and refocused attention on Harvard’s largest cheating scandal in memory, which involved a take-home final exam in a government class last spring. After an investigation, about 70 students were forced to take a leave of absence.

In September, when confidential information about cheating cases appeared in news reports, administrators ordered searches of the email accounts of 16 resident deans, the individuals who are responsible for the job of resident dean.

Hart and other professors said the statements eased the concerns about finding the source of the leaks.

The statement did not say whether email accounts of 16 resident deans, who were told to protect “the privacy of the resident dean who was accused of cheating and had sought the confidential email had been forwarded. The search determined that one resident dean had forwarded the email to two students who were accused of cheating and had sought the dean’s advice.

Hammonds and Smith wrote that the resident dean who had forwarded the messages did so in good faith and was not punished. The statement did not say whether administrators determined how the email found its way to the news media, or who was responsible for the other leak, of the Administrative Board’s deliberations.

That resident dean and one other were told about the email searches shortly after they took place, administration said, but the other 16 resident deans were not told until last week, after The Boston Globe inquired about the matter.

“They were not told to protect “the privacy of the resident dean who had made an inadvertent error,” Hammonds and Smith wrote. “We understand that others may see the situation differently, and we apologize if any resident deans feel our communication at the conclusion of the investigation was insufficient.”

On his blog, Michael Mitzenmacher, a computer science professor, wrote that he was satisfied with some parts of the administration’s explanation, but “in my opinion, the administration made an error in judgment” in not telling the resident deans of the search.

Willyerd Schmid, a mathematician professor, said he still wanted to know more about what happened.

“I certainly get the sense that many of my colleagues will be upset, and so there will be a discussion,” he said. But he urged the faculty not to lose sight of what he considered the bigger issue, the cheating episode itself.

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Winter Performance

Sunday, March 17th at 3pm
in Kresge Auditorium
Will feature works by Shostakovich, Grainger, Persichetti, Poulenc, Holst, and Saint-Saens
Free dinner following performance!

Play a wind or percussion instrument?
Come join us!
All levels accepted – no auditions required. Come to rehearsal and introduce yourself!
Sundays 6-8pm and Tuesdays 7-9pm in W20-407

For more information, email the band officers at bavicchi-lives@mit.edu

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SCHOOL OF HUMANITIES, ARTS & SOCIAL SCIENCES
Women underrepresented at energy conference

Five percent of attendees were women, sparking discussion on industry gender disparity

By Zain Shauk
THE TECH:

Suddenly, a young woman stood up to talk.

She told the breakfast audience at last week’s IHS CERAWeek conference that they were losing money with old technology, that they should consider ways to use better data and cut down on costs.

Instead, an executive who missed her introduction asked her if she was an intern or a marketing representative.

Allison Lami Sawyer’s title is CEO. Of the roughly 30 CEOs who came to speak at the testosterone-heavy conference that closed Friday, only two were women.

At a breakfast event hosted at The Grove restaurant in Discovery Green downtown, only two women were.

It’s a fact that was hard to ignore and is representative of the energy industry’s largely male executive ranks.

“It’s just so strange,” said Sawyer, 28, CEO of leak-detection startup Rebellion Photonics. “You just never get over it.”

Many attendees are simply not used to seeing women as executives in the energy industry. And that’s because there are so few of them.

At a breakfast event hosted at The Grove restaurant in Discovery Green for 55 CEOs in attendance at the conference, just two were women, said Spectra Energy Partners CEO Julie Dill, who was there. The gender disparity among conference attendees and speakers was the same, she said.

“It was really startling not to see more women on the panels and, quite frankly, when you look around the audience there are not a lot of women,” Dill said.

Wrong on her status

Dill, who is 53 and spent 17 years at Shell Oil Co. before joining Spectra, said she was mistaken at the conference for an employee of lower status, something that happens frequently in the industry.

“There have been occasions where they’ve believed that I was the secretary,” Dill said.

Sawyer said that some responsibility for the heavily male executive ranks falls on women, perhaps for not pursuing careers in the industry. And there aren’t too many examples to follow, she added.

“I think there’s a problem finding mentors,” Sawyer said. But Dill described a lack of understanding at some companies of how women’s family obligations can be incorporated into a high-level career.

Energy companies say they are addressing the issue and have made an effort to hire more women.

But Dill described a lack of understanding at some companies of how women’s family obligations can be incorporated into a high-level career.

“Rebellion Photonics. “You just never take a place within management ranks of industry and we’re pleased to be incorporated into a high-level career,” said Dill, or to managing their return to the workplace after child-bearing years.

More diversity could generate innovation in the industry, said Kurt Glaubitz, a spokesman for Chevron Corp., which sponsored the IHS CERAWeek breakfast event where Sawyer spoke.

“The example that she provided is one that demonstrates how we can help to become more efficient in our current operations as we also look over the horizon at new technologies that will foster the fuel of tomorrow,” he said.

Glaubitz said Sawyer’s selection for Energy Innovation Pioneers breakfast was encouraging and part of a trend of increased women’s employment in energy.

“It’s a testament to universities and higher education that they are better preparing women in order to take a place within management ranks of industry and we’re pleased to see that trend improving,” Glaubitz said.

From 2010 through 2012, 399 bicycle accidents were reported in Cambridge.

Over 30% happened on Massachusetts Avenue, including one student death on our campus.

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Statistics reported by: Wicked Local on 4/18/12

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The Barker Reading Room has reopened as a 24-hour study space.

Enjoy the beauty of the open oculus, better lighting, and other improvements that make this a perfect spot for studying–during the day or at 3 am!

Use your MIT ID for secure access to the Barker Reading Room after hours.
Track gets 13th at NCAAs
MIT women’s track and field concluded their season at the NCAA Championship

By Charlotte Brackett

To conclude the indoor season, seven members of the No. 8 nationally-ranked MIT women’s track and field team traveled to North Central College for the NCAA Division III Championship that will take place on Friday and Saturday. The Engineers, who finished in 26th place at last year’s NCAA championship, wrapped up the meet tied for 12th place with Kenyon State College with 15 points. The University of Wisconsin-Oshkosh, who led from the very beginning, finished in first place with 56 points.

The Engineers, who finished in 26th place last year, wrapped up the meet tied for 13th place.

At the coaches’ and athletes’ banquet the night before the meet, Sarah K. Quinn ’16 received the New England Region Female Athlete of the Year award for her impressive season that included three national qualifying performances, a New England title in the 3,000, three MIT varsity records and three MIT freshman records. Lauren B. Kuntz ’13 opened up action for MIT with her impressive performance in the pole vault, clearing the bar at 12-11.50, claiming second place and All-America accolades. The national runner-up, who was seeded in fourth place going into the meet, improved on her previous personal record of 12-05.50 from the New England Championship late last month by a sizable amount. She earned eight points towards the Engineers’ final score.

In the pentathlon, Jaclyn Konopka ’14 finished in sixth place with 3,387 points, tying with Elizabeth Crug of Hendrix, earning a spot on the awards podium. All-America accolades and three points to go towards MIT’s score. Last week at the Eastern College Athletic Conference (ECAC) Championship at the New York City Armory, Konopka earned personal best performances in all five events, finishing with 3,422 points.

In her NCAA debut, Nicole A. Zestman ’16 came in 12th place in the prelims of the mile with a time of 5:01.89, improving her time from the Last Chance Meet at Tufts University last weekend by four seconds.

Lauren B. Kuntz ’13 had an impressive performance in the pole vault, claiming 2nd place.

To end the first day, the Distance Medley relay, that consisted of Brooke C. Johnson ’13, Cindy Y. Huang ’15, Alexandra B. Taylor ’14 and Quinn crossed the line with a time of 1:40.38. Their fifth place finish earned them four points.

On the second and final day of competition, Quinn competed in the 5000 meters, finishing in 11th place with a time of 1:38.43. Many of the members of the indoor team will be returning to action in two weeks for the start of the outdoor track and field season at the Jerry Gravel Invitational at Westfield State University on Saturday, March 23.

Engineers win again
MIT men’s tennis remains undefeated after their big win over Bates College

By Charlotte Brackett

A few hours before another snowstorm was set to hit New England on Wednesday afternoon, MIT men’s tennis faced Bates College in the J.B. Carr Tennis Bubble, walking away with a 6-3 win. The undefeated Engineers increased their streak to 7-0, the longest they have remained unbeaten in the past five seasons. The Beavers’ record fell to 0-3.

The match got off to a rocky start when Edwin M. Zhang ’14 and Curtis L. Wu ’13 fell 8-1 to Pierre Planche and Timothy Berg in the No. 1 position of doubles and Matthew T. Skalak ’13 and Larry Pang ’13 were defeated by Henry Lee and Matt Bittles, 6-8, in the second spot. Eugene H. Oh ’15 and Kevin Wang ’16 picked up an 8-5 win at No. 3 spot against Ben Bogard and Dylan Bettle to end doubles.

Trailing 2-1 going into singles, the Engineers soon took over the lead with Zhang’s win over Bettles, 6-4, 6-2.

Continuing singles action, Oh came away with a 6-4, 7-5 win over Henry Lee at No. 4. Bates avoided the singles sweep when Ben Bogard took a 6-2, 7-5 win over Wu in the fifth position. Skalak had an easy 6-2, 6-1 victory over Andrew Salvadore at No. 6 to end the day.

MIT returns to action on Saturday, March 9 when it hosts Baruch College at 1:00 p.m.

UPCOMING HOME EVENTS

Wednesday, March 13
Men’s Lacrosse vs. St. John’s University
Thursday, March 14
Softball vs. Newbury College
Softball vs. Newbury College
Women’s Lacrosse vs. Lasell College