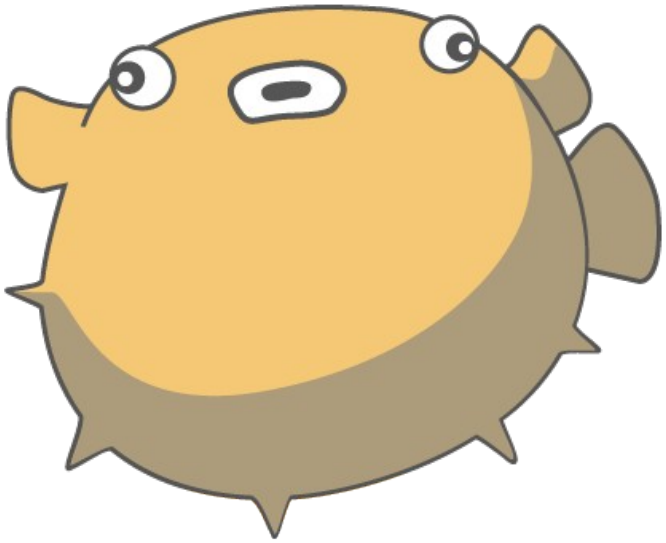
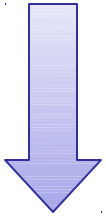
Hello, PyCon.

Hilary Mason
@hmason h@bit.ly

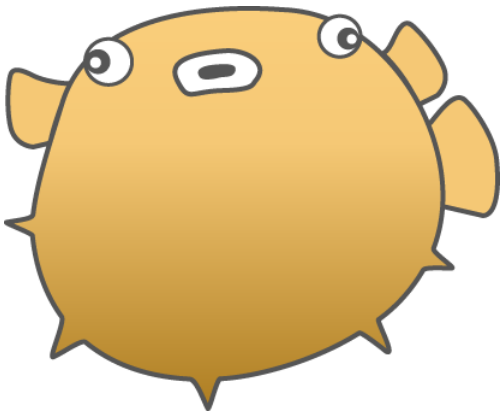


http://docs.python.org/library/multiprocessing.html



http://bit.ly/gAoGqE

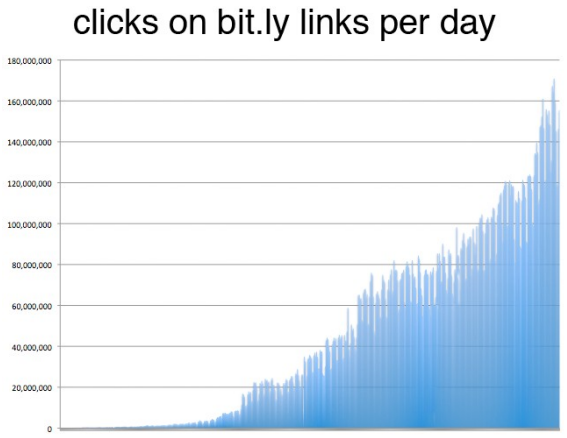
wicked hard problem



10s of millions of URLs /day

100s of millions of events / day

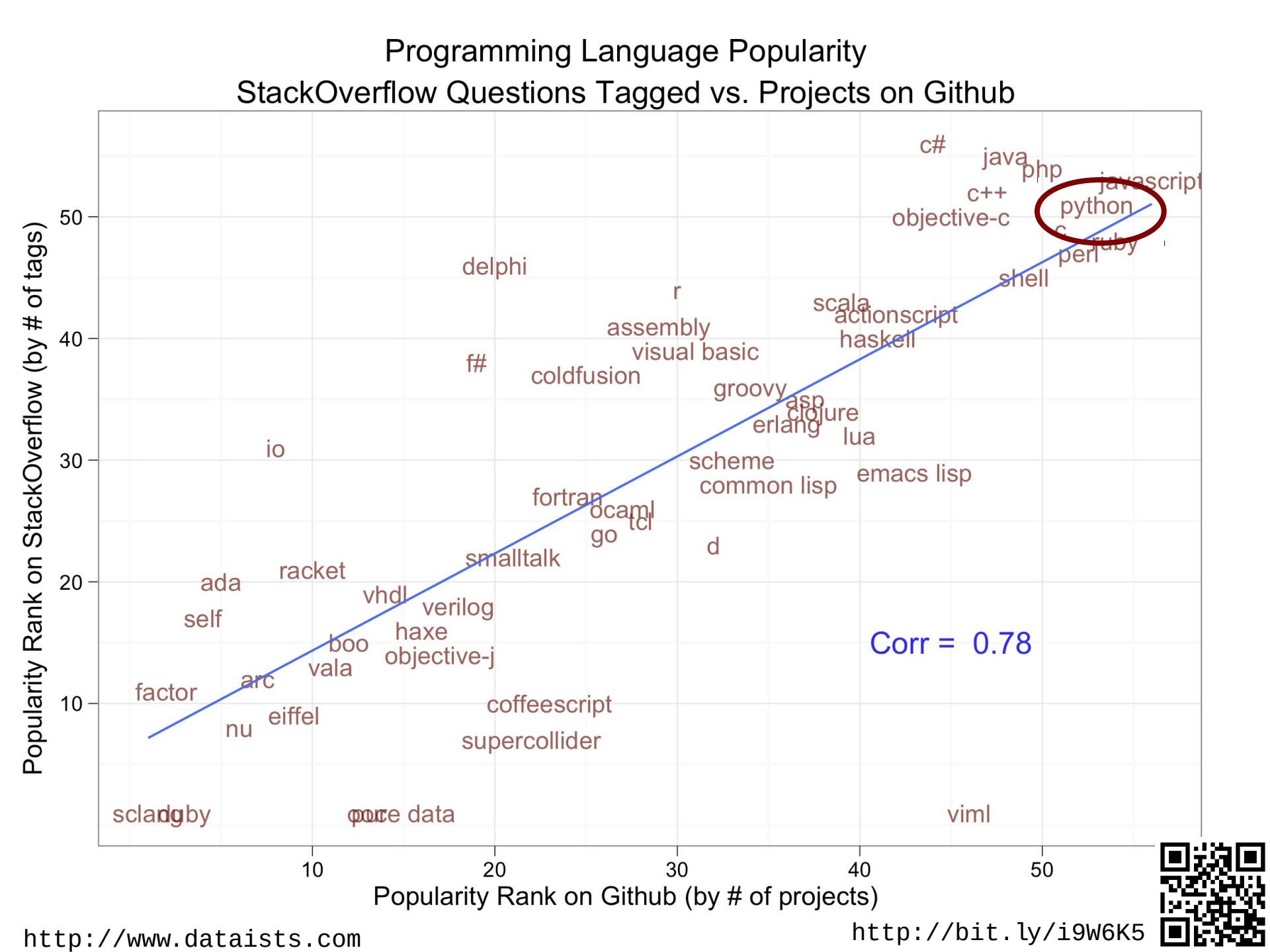
1000 of data



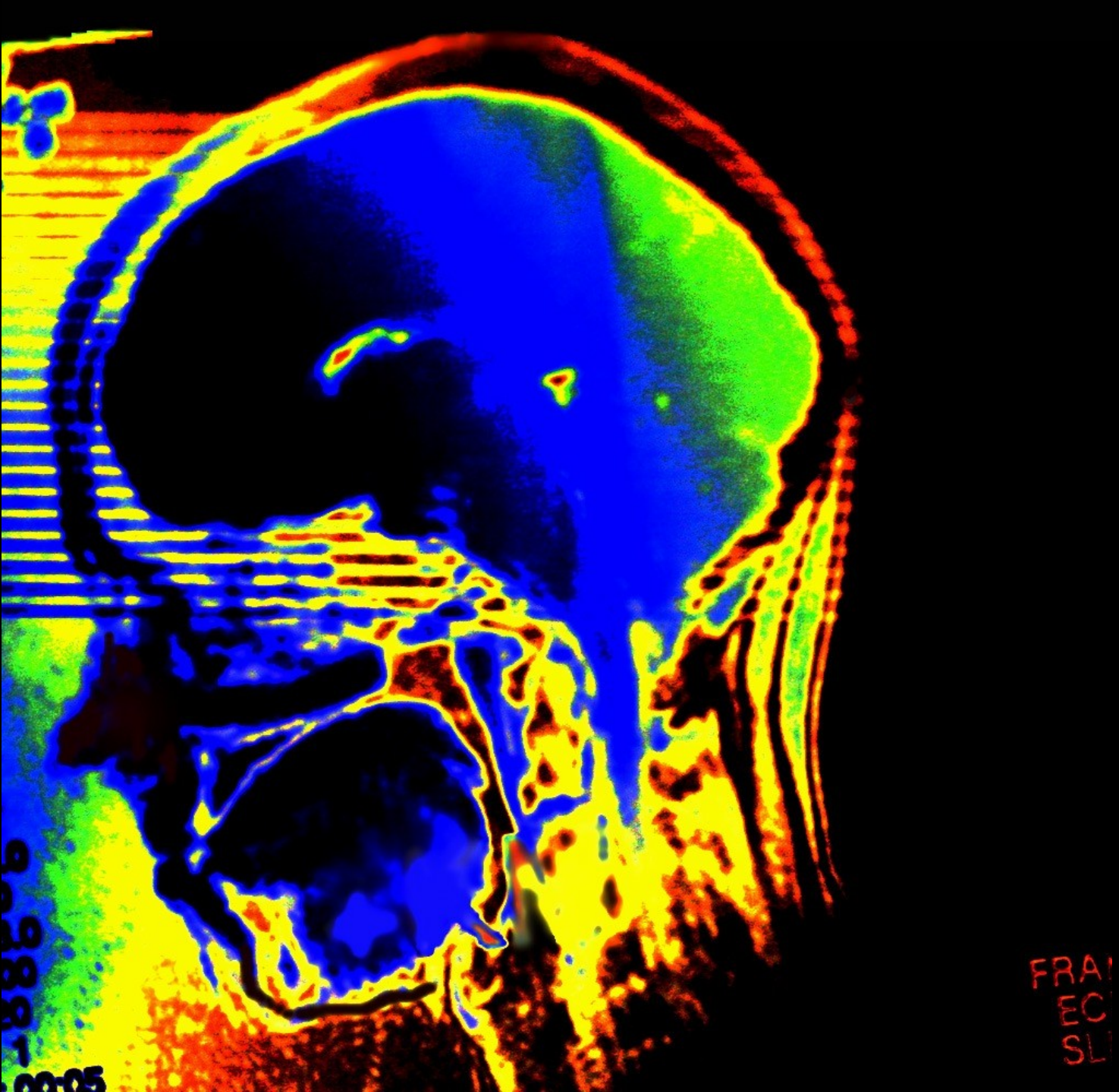
```
a= 'print "a=",repr(a);print "exec(a)"'
exec(a)
```


HAPPY
BIRTHDAY


KARATE
SKIP
BLACKTOP
SKATER


Programming Language Popularity
StackOverflow Questions Tagged vs. Projects on Github
Popularity Rank on StackOverflow (by # of tags)
Popularity Rank on Github (by # of projects)
10
20
30
40
50
c#
java
php
javascript
c++
python
objective-c
ruby
perl
shell
delphi
r
scala
actionscript
assembly
haskell
visual basic
f#
coldfusion
groovy
asp
clojure
erlang
lua
io
scheme
emacs lisp
common lisp
fortran
ocaml
tcl
go
d
smalltalk
racket
ada
vhdl
verilog
self
haxe
boo
objective-j
vala
arc
factor
coffeescript
eiffel
nu
supercollider
viml
Corr = 0.78
http://www.dataists.com
http://bit.ly/i9W6K5

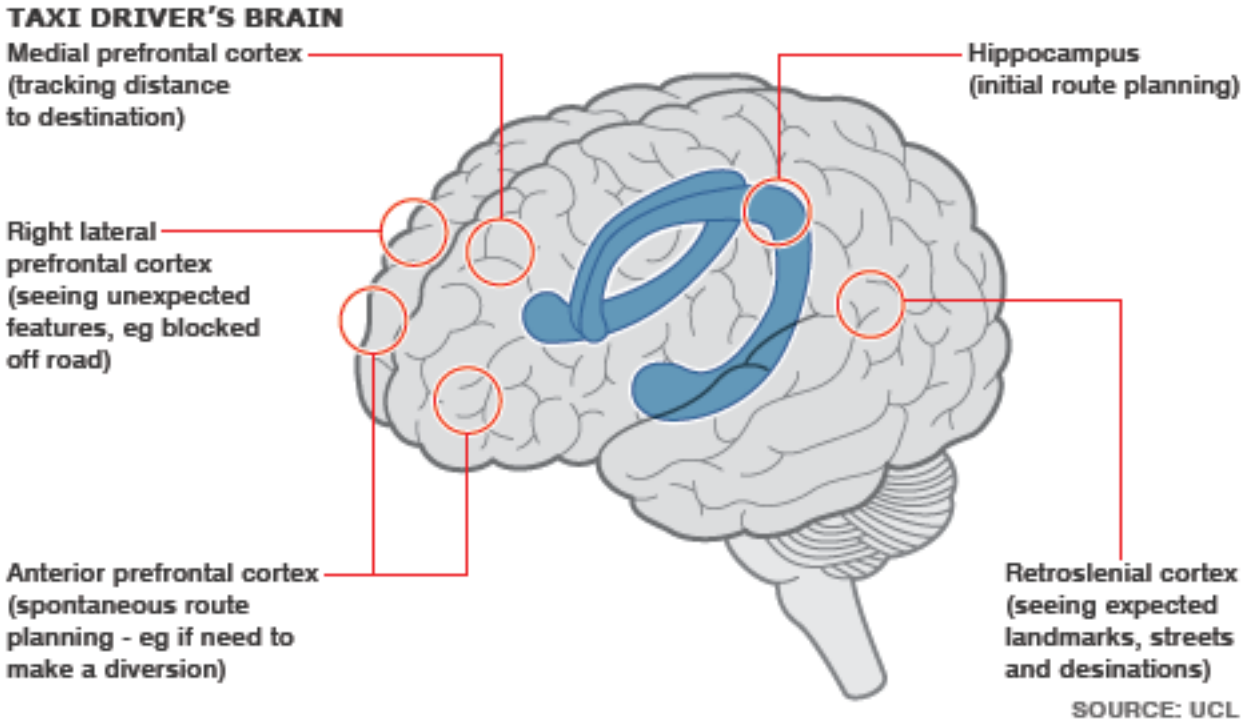
http://bit.ly/eDrFCJ



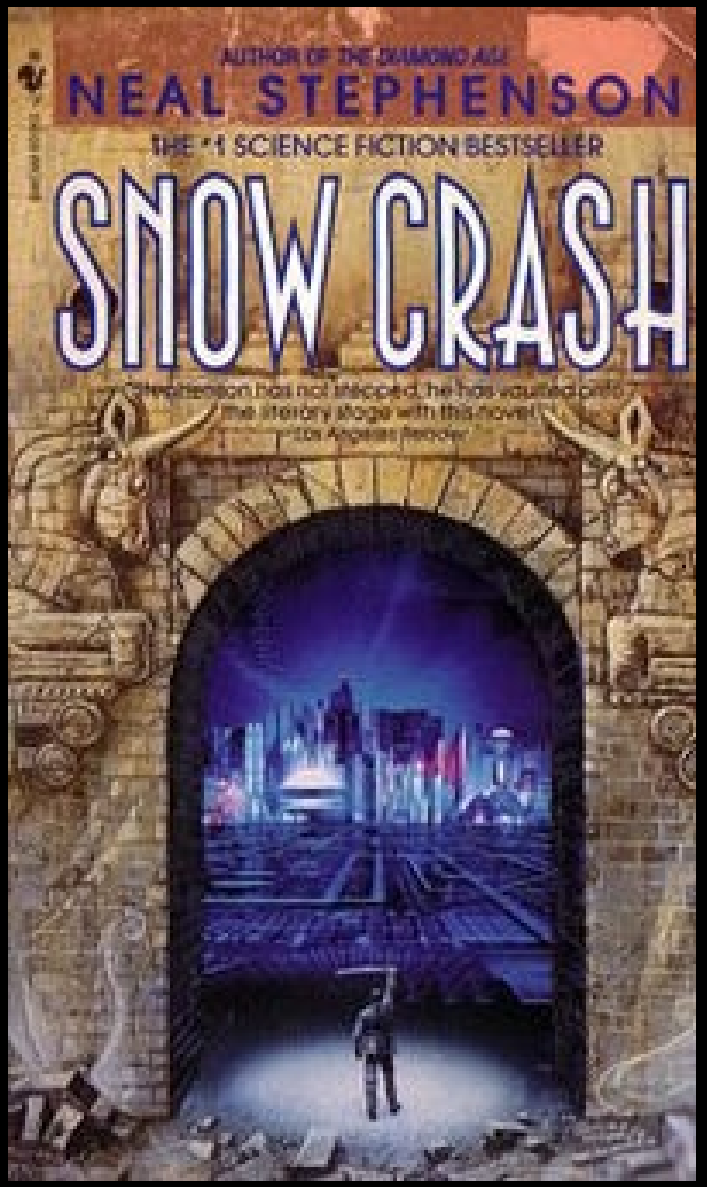
Computational thinking means creating and making use of different levels of abstraction, to understand and solve problems more effectively.

http://www.cs.cmu.edu/~CompThink/

BBC: Taxi drivers ‘have brain sat-nav’



http://bbc.in/f20qmq

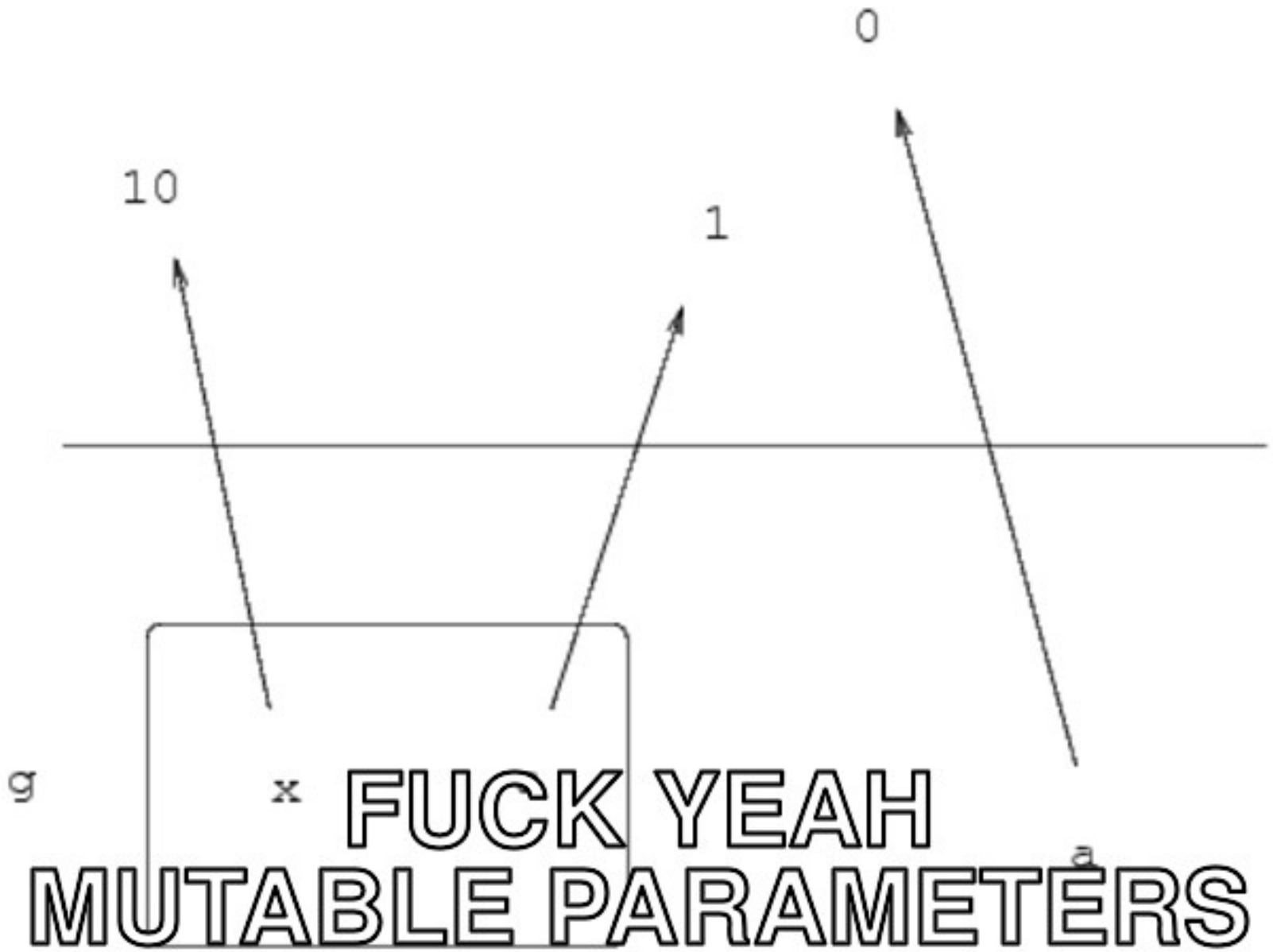

AUTHOR OF THE DIAMOND AGE
NEAL STEPHENSON
THE #1 SCIENCE FICTION BESTSELLER
SNOW CRASH

“If you’ve never programmed a computer, you should. There’s nothing like it in the whole world.”

– Cory Doctorow, *Little Brother*

HAND-HELD HAPPY

Which Python constructs make you happy?



FUCK YEAH MUTABLE PARAMETERS

with

```
with open("jenkins.c") as f:
    data = f.read()
    print data
```

generators

```
total = sum(num * num
        for num in xrange(1, 1000000000))
```

decorators

```
@imadecorator
def imafunction():
    print 'inside'
```

Search Home Profile Messages Who To Follow

hmason Hilary Mason
Hey programmers, what's your favorite Python language construct? #pycon
7 Mar

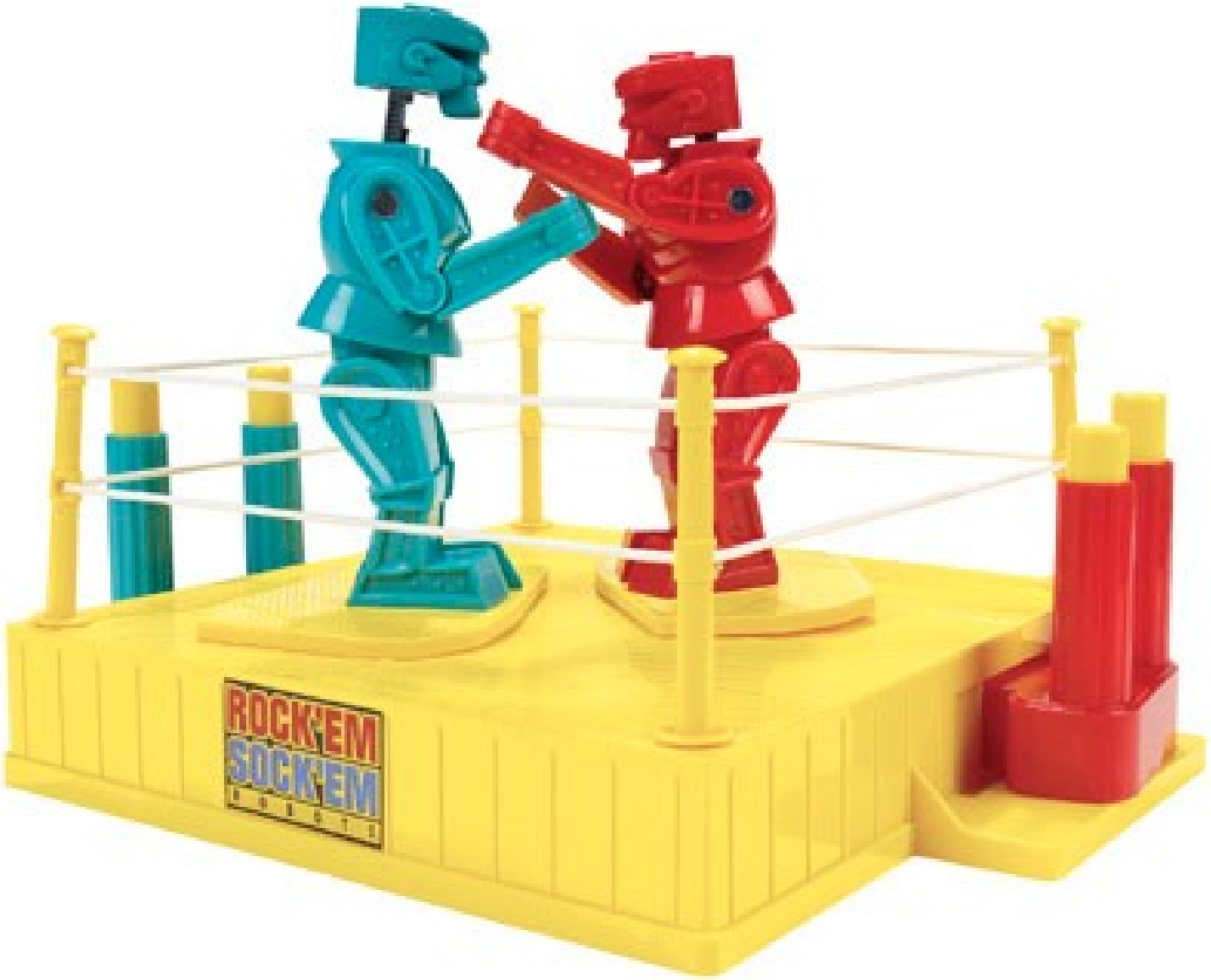
in reply to @hmason ↑

@briandoll
Brian Doll

@hmason best Python construct: Popen(['ruby', 'script.rb'], stdin=PIPE, stdout=PIPE, stderr=STDOUT)

7 Mar via Twitter for Mac ☆ Favorite ↻ Retweet ↩ Reply

(ridiculous, yes)



And the winner is...?

List Comprehensions

```
squares = [n ** 2 for n in range(10)]
```

<3

$$S = \{ f(x) \mid x \in \mathrm{N}, x^2 > 1 \}$$

SETL

```
[n in [2..N] | forall m in {2..n - 1} | n mod m > 0]
```

Series $\frac{n}{1}$, $\frac{n-1}{2}$, $\frac{n-2}{3}$, $\frac{n-3}{4}$, $\frac{n-4}{5}$, &c. as there are Units in l; or if l be greater than $\frac{1}{2}n$, write as many of them as there are Units in $\frac{1}{2}n - l$; then let all thoſe terms be multiplied together, and the product be again multiplied by $a^l b^{n-l}$; and this laſt product will exhibit the term expreſſing the number of Chances required.

Thus if it be required to aſſign the number of Chances for throwing preciſely three Aces, with ten Dice; here l will be $= 3$, and $n = 10$. Now becauſe l is leſs than $\frac{1}{2}n$, let ſo many terms be taken of the Series $\frac{n}{1}$, $\frac{n-1}{2}$, $\frac{n-2}{3}$, $\frac{n-3}{4}$, &c. as there are Units in 3, which terms in this particular caſe will be $\frac{10}{1}$, $\frac{9}{2}$, $\frac{8}{3}$; let thoſe terms be multiplied together, the product will be 120; let this product be again multiplied by $a^l b^{n-l}$, that is (a being $= 1$, $b = 9$, $l = 3$, $n = 10$) by 6042969, and the new product will be 725156280, which conſequently exhibits the number of Chances required. Now this being divided by the 10^{th} power of $a + b$, that is, in this caſe, by 10000000000, the quotient 0.0725156280 will expreſs the Probability of throwing preciſely three Aces with ten Dice; and this being ſubtracted from Unity, the remainder 0.9274843720 will expreſs the Probability of the contrary; and therefore the Odds againſt throwing three Aces preciſely with ten Dice are 9274843720, to 725156280, or nearly as 64 to 5.

Although we have ſhewn above how to determine univerſally the Odds of winning, when two Adverſaries being at play, reſpectively want certain number of Games of being up, and that they have any given proportion of Chances for winning any ſingle Game; yet I have thought it not improper here to annex a ſmall Table, ſhewing thoſe Odds, when the number of Games wanting, does not exceed ſix, and that the Skill of the Contenders is equal.

Games wanting.	Odds of winning.	Games wanting.	Odds of winning.	Games wanting.	Odds of winning.
1, 2 - - -	3, 1	2, 3 - -	11, 5	3, 5 - -	99, 29
1, 3 - - -	7, 1	2, 4 - -	26, 6	3, 6 - -	219, 37
1, 4 - - -	15, 1	2, 5 - -	57, 7	4, 5 - -	163, 93
1, 5 - - -	31, 1	2, 6 - -	120, 8	4, 6 - -	382, 130
1, 6 - - -	63, 1	3, 4 - -	42, 22	5, 6 - -	638, 386

Before

Before I put an end to this Introduction, it will not be improper to ſhew how ſome operations may often be contracted by barely introducing one ſingle Letter, inſtead of two or three, to denote the Probability of the happening of one Event.

18. Let therefore x denote the Probability of one Event; y, the Probability of a ſecond Event; z, the Probability of the happening of a third Event: then it will follow, from what has been ſaid in the beginning of this Introduction, that $1 - x$, $1 - y$, $1 - z$ will repreſent the reſpective Probabilities of their failing.

This being laid down, it will be eaſy to anſwer the Queſtions of Chance that may ariſe concerning thoſe Events.

1°. Let it be demanded, what is the Probability of the happening of them all; it is plain by what has been demonſtrated before, that the anſwer will be denoted by xyz.

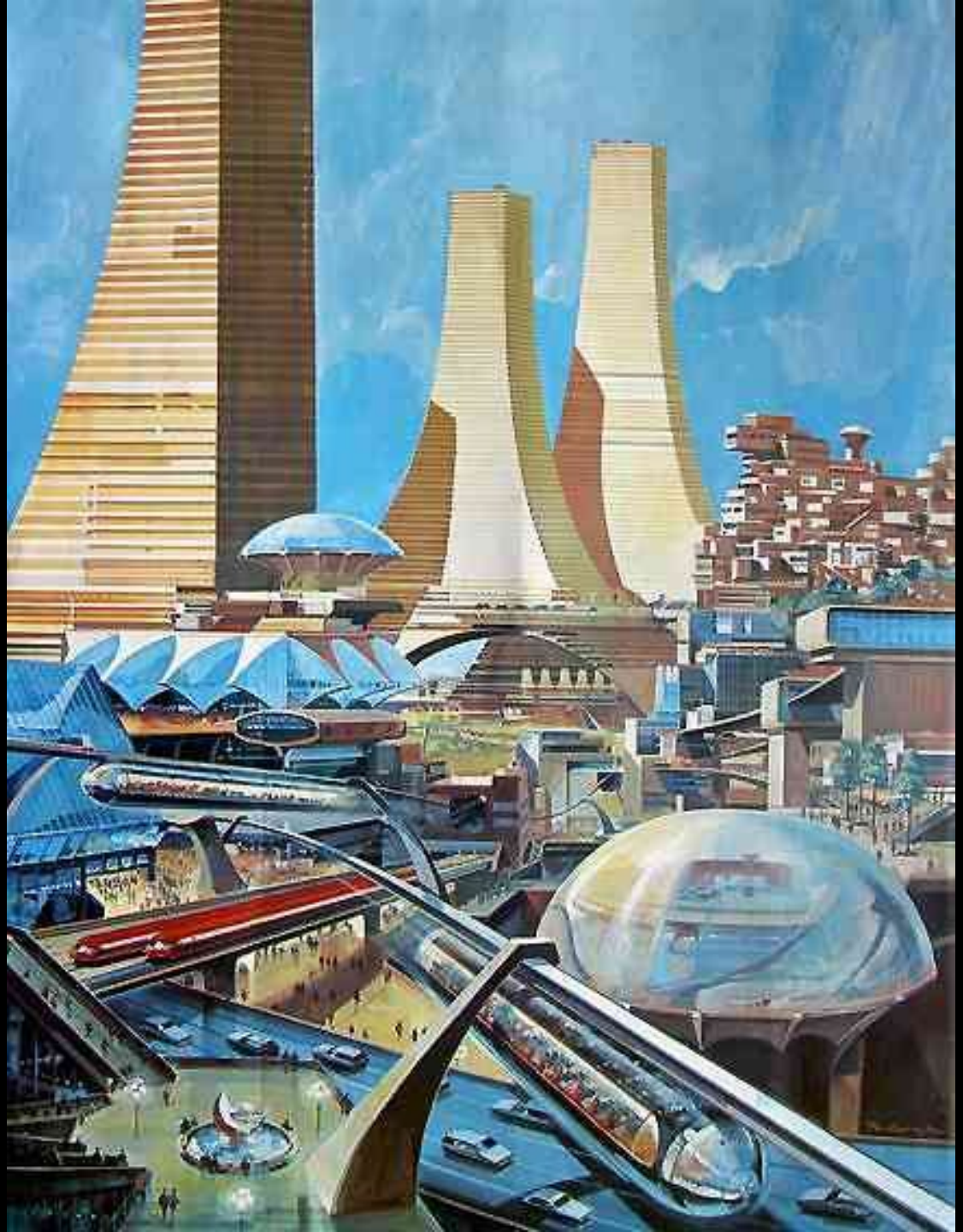
2°. If it is inquired, what will be the Probability of their all failing; the anſwer will be $\overline{1 - x} \times \overline{1 - y} \times \overline{1 - z}$, which being expanded by the Rules of Multiplication would be $1 - x - y - z + xy + xz + yz - xyz$; but the firſt expreſſion is more eaſily adapted to Numbers.

3°. Let it be required to aſſign the Probability of ſome one of them or more happening; as this queſtion is exactly equivalent to this other, what is the Probability of their not all failing? the anſwer will be $1 - \overline{1 - x} \times \overline{1 - y} \times \overline{1 - z}$, which being expanded will become $x + y + z - xy - xz - yz + xyz$.

4°. Let it be demanded what is the Probability of the happening of the firſt and ſecond, and at the ſame time of the failing of the third, the Queſtion is anſwered by barely writing it down algebraically; thus, $xy \times \overline{1 - z}$, or $xy - xyz$: and for the ſame reaſon the Probability of the happening of the firſt and third, and the failing of the ſecond, will be $xz \times \overline{1 - y}$ or $xy - xyz$: and for the ſame reaſon again, the Probability of the happening of the ſecond and third, and the failing of the firſt, will be $yz \times \overline{1 - x}$, or $yz - xyz$. And the Sum of thoſe three Probabilities, *viz.* $xy + xz + yz - 3xyz$. will expreſs the Probability of the happening of any two of them, but of no more than two.

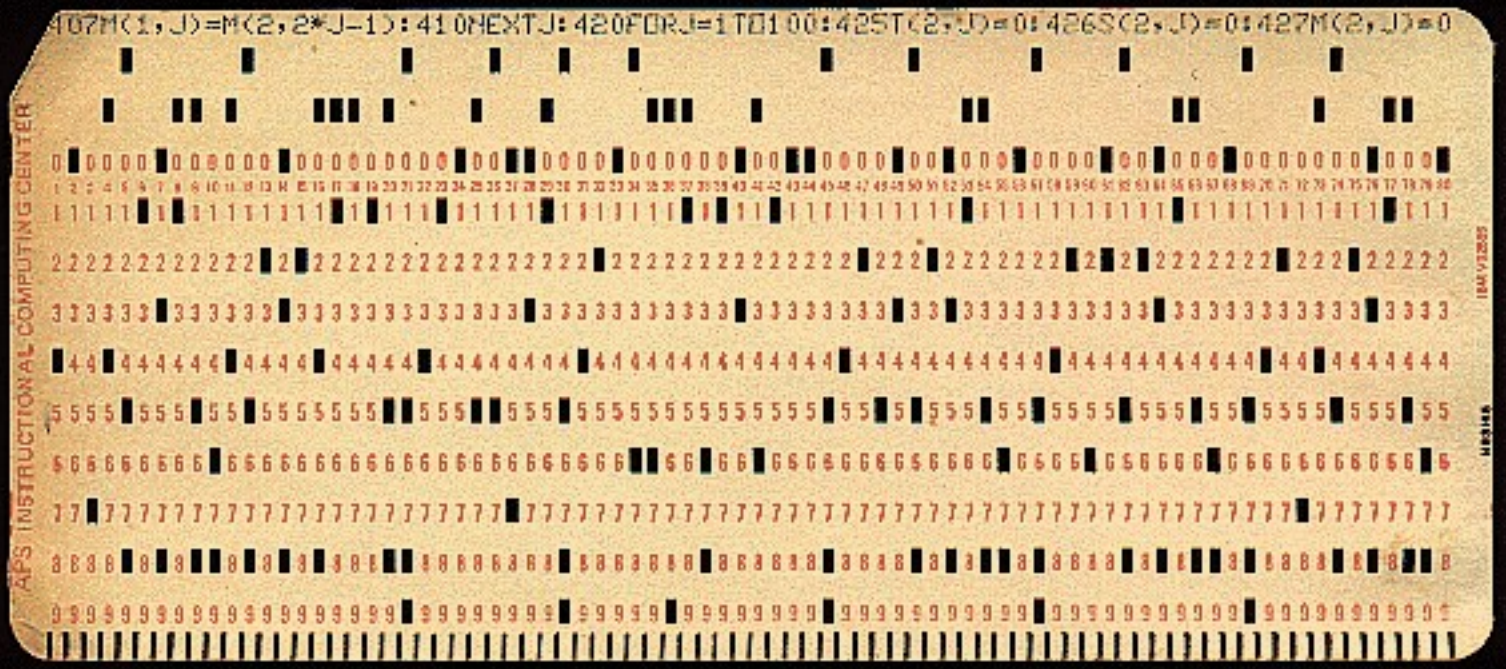
5°. If it be demanded what is the Probability of the happening of the firſt, to the excluſion of the other two, the anſwer will be $x \times \overline{1 - y} \times \overline{1 - z}$, or $x - xy - xz + xyz$; and in the ſame manner, the Probability of the happening of the ſecond to the excluſion of the other two, will be $y - xy - yz + xyz$; and again, the Probability of the happening of the third, to the excluſion of the

other



What’s next?

Data.


407M(1,J)=M(2,2*J-1):410NEXTJ:420FORJ=1TO100:425T(2,J)=0:426S(2,J)=0:427M(2,J)=0
APS INSTRUCTIONAL COMPUTING CENTER

Realtime.

Massively.
Parallel.
Computing.

```
python video_lectures.py <video_lectures_url> <output_dir>

Example:
python video_lectures.py http://videolectures.net/cikm08_elkan_llmacrf/ elkan
"""

import multiprocessing
import os
import re
import subprocess
import sys
import urllib


def stream_wmv(url, out_file):
    cmd = 'mencoder %s -o %s -ovc copy -oac copy' % (url, out_file)
    subprocess.call(cmd.split())

def main(vl_url, output_dir):
    url_data = urllib.urlopen(vl_url).read()
    wmv_url = re.search('(mms://.*\.wmv)', url_data).group(1)[:-6]
    video_nums = map(int, re.findall("setvideo\('([0-9]+)'\)", url_data))
    videos = [('%s%.2d.wmv' % (wmv_url, x), '%s/%d.avi' % (output_dir, x))
              for x in video_nums]
    print(videos)
    try:
        os.mkdir(output_dir)
    except OSError:
        pass
    procs = [multiprocessing.Process(target=stream_wmv, args=x) for x in videos]
    for x in procs:
        x.start()
    for x in procs:
        x.join()

if __name__ == '__main__':
    if len(sys.argv) < 3:
        print(__doc__)
        sys.exit(1)
    main(*sys.argv[1:])
```

WTF?

http://bit.ly/ezd9UE

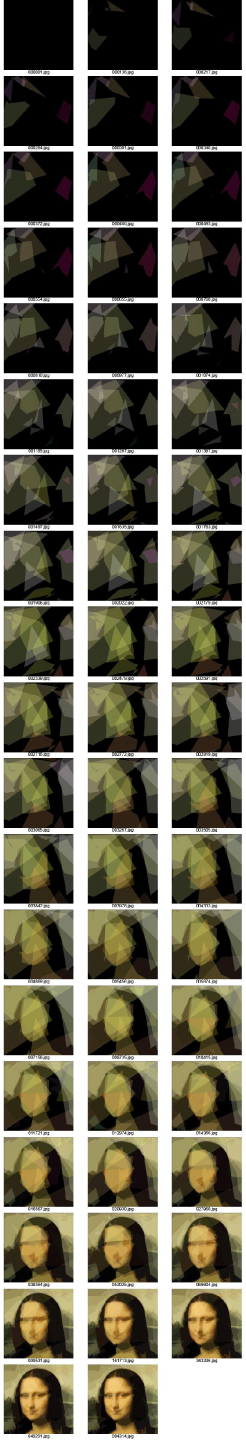
Process and security.

http://engt.co/e9QPj2

Interactions.

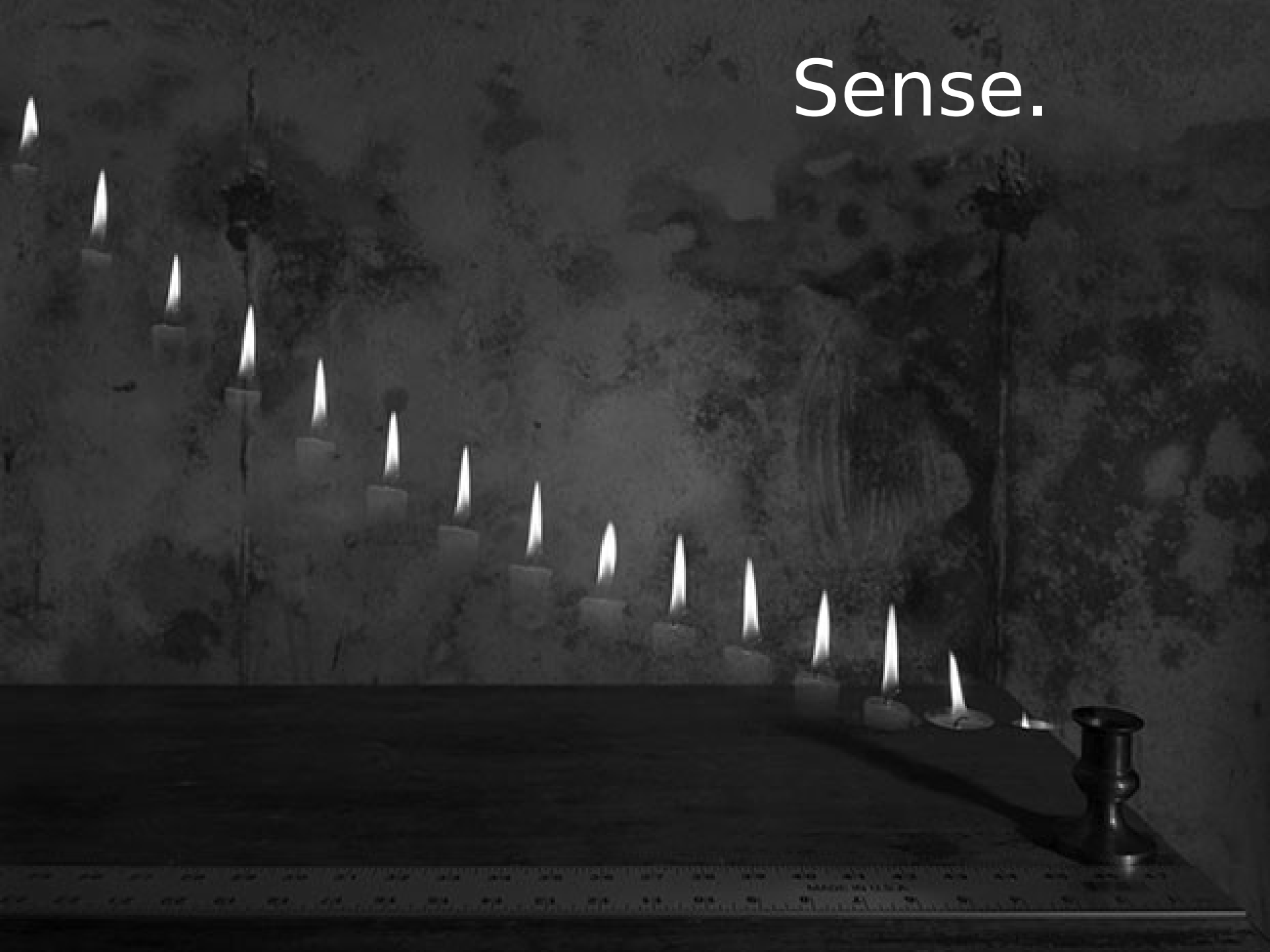
“How can we build computer systems that automatically improve with experience, and what are the fundamental laws that govern all learning processes?”

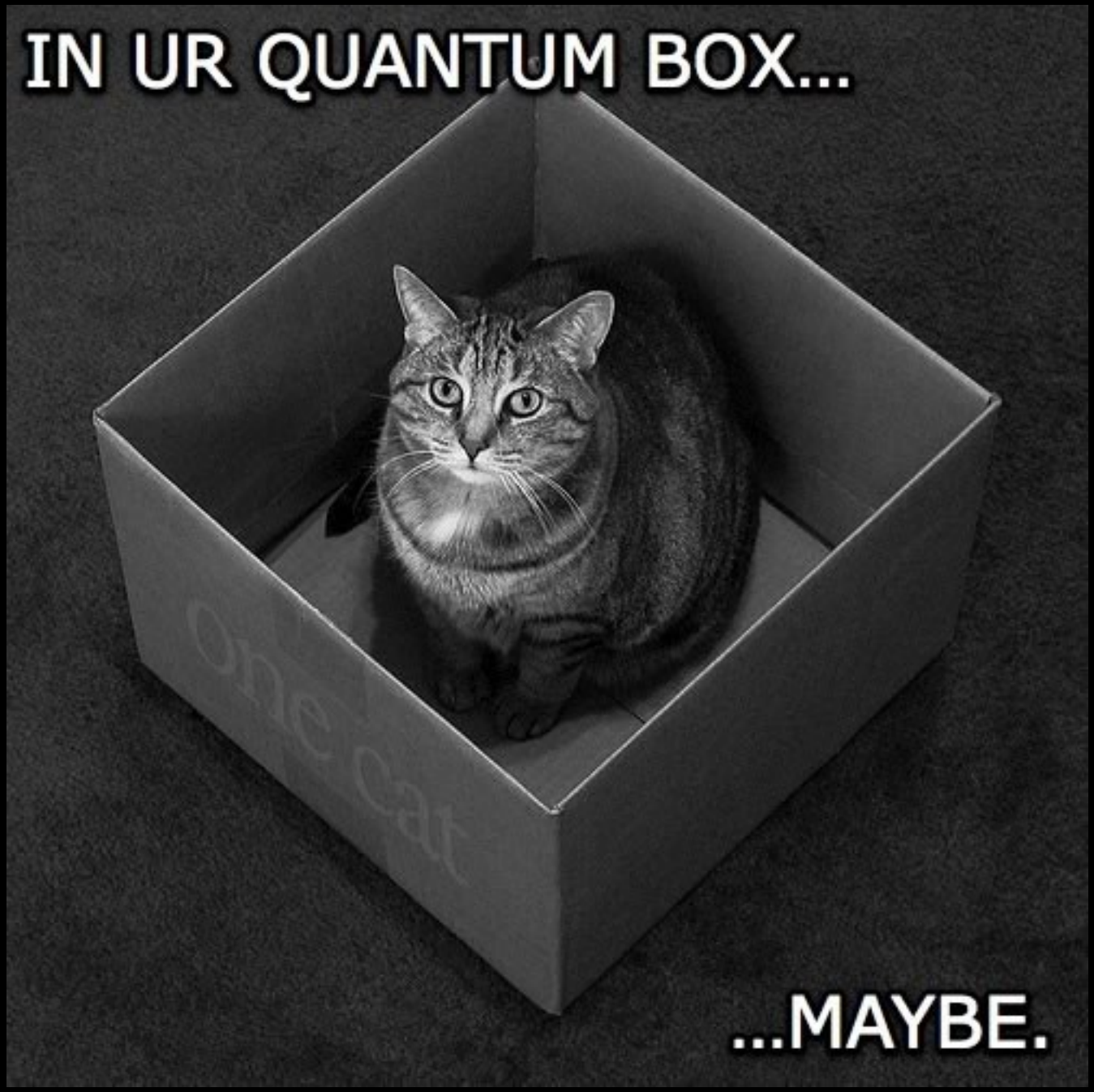
-- Tom Mitchell, CMU



Evolving the Mona Lisa.

http://bit.ly/i5LC1w


Sense.


IN UR QUANTUM BOX...
...MAYBE.

PyCon 2011: Connecting The Python Community

The Python Software Foundation is proud to present the annual Python community conference, PyCon 2011. PyCon 2011 will be held **March 9th through the 17th, 2011 in Atlanta, Georgia**. The PyCon conference days will be March 11-13, preceded by two tutorial days (March 9-10), and followed by four days of development sprints (March 14-17th).

Keynotes: We are pleased to announce our first keynote will be given by Hilary Mason, chief data scientist at Bit.ly. See more on the keynotes page.

Sponsors: If you are interested in being a sponsor for PyCon - and really, everyone can and should be, see the sponsors page.

Surveys

If you are attending PyCon, please fill out our surveys, sponsored by Survey Monkey:

- Tutorial Survey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Happy 18th Birthday, Ruby!

By **Peter Cooper** / February 24, 2011

Yes, I'm sad enough to have had this in my calendar for some time but.. it's Ruby's 18th "birthday" today! **Happy Birthday Ruby!** While this means she can drink, vote, and otherwise join her slightly older friends Perl (24) and Python (21) in the nightclubs of Europe, I was surprised to learn that coming of age in Japan is at 20 years old.

From Wikipedia's Ruby entry:

> The name "Ruby" was decided on during an online chat session between Matsumoto and Keiju Ishitsuka on February 24, 1993, before any code had been written for the language. Initially two names were proposed: "Coral" and "Ruby", with the latter being chosen by Matsumoto in a later email to Ishitsuka. Matsumoto has later stated that a factor in choosing the name "Ruby" was because it was the birthstone of one of his colleagues.
>
> *Wikipedia*

If you're interested in learning more, this interview with Matz back in 2001 will give you more history and background to the creation of Ruby.

Latest Feature

How
RSp
Fas

Ruby and Rails

Software Engine
HealthCentral.com

NAKED PASSWORD

dow
Make y

github
"P

What is naked password?

The whole idea of naked password is to encourage your users to enter stronger passwords.
Our beautiful model Sally tastefully removes items of clothing as the password grows stronger.

Usage

Naked password is extremely easy to use. All thats needed is for you to attach nakedPassword(); to one or all of your password fi

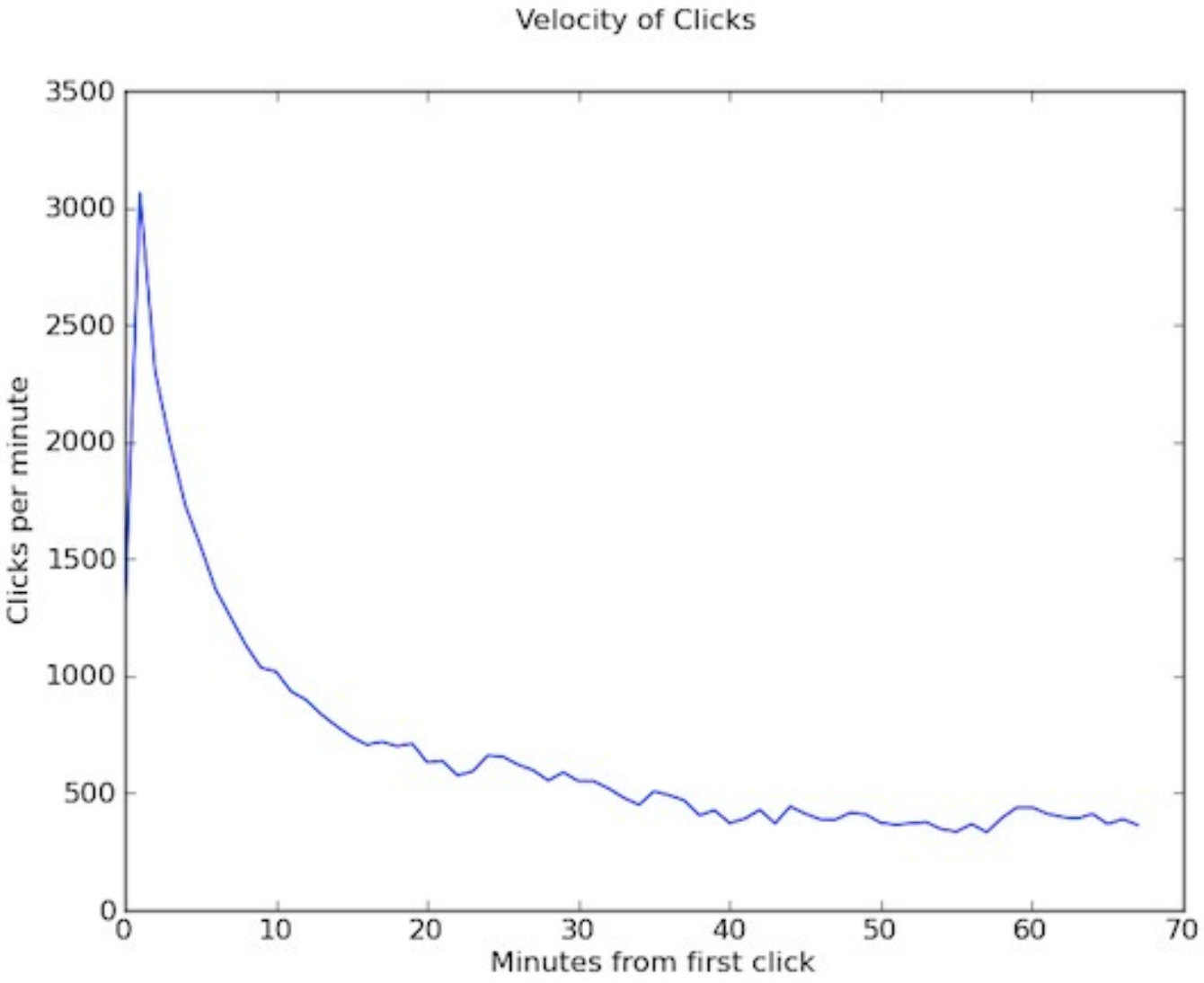
```
$("input:password").nakedPassword();
```

Naked password assumes that the images are uploaded in a publicly accessible folder called "images/".
You can overwrite the images path as follows:

```
$("input:password").nakedPassword({path: "/new_image_path/"});
```

Note: If you want to use it on multiple fields on one page, make sure these fields have unique id's.


HATERS GONNA HATE


Velocity of Clicks
Clicks per minute
Minutes from first click
0
500
1000
1500
2000
2500
3000
3500
0
10
20
30
40
50
60
70

Past
Past 8–30 days
Significant Earthquakes
Earthquake Lists & Maps
Search for an Earthquake
Present
Real-time - CA/NV
Real-time - USA
Real-time - Worldwide
About Earthquake Maps
KML / RSS Feeds & Data
Earthquake Notifications
Seismogram Displays
Earthquake Animations
Did You Feel It?
ShakeMaps
PAGER
EQ Summary Posters
Future
Earthquake Scenarios
Prediction
Probabilities

Latest Earthquakes M5.0+ in the World - Past 7 days

Latest Earthquakes Magnitude 5.0 and Greater in the World - Last 7 days

Versión en Español

Magnitude 5 and greater earthquakes located by the USGS and contributing networks in the last week (168 hours). Magnitudes 6 above are in red. (Some early events may be obscured by later ones on the maps.)

The most recent earthquakes are at the top of the list. Times are in Coordinated Universal Time (UTC). Click on the word "map" t a ten-degree tall map displaying the earthquake. Click on an event's "DATE" to get a detailed report.

DISCLAIMER

Update time = Fri Mar 11 12:40:29 UTC 2011

	MAG	UTC DATE-TIME y/m/d h:m:s	LAT deg	LON deg	DEPTH km	Region
MAP	5.3	2011/03/11 12:24:37	36.525	141.707	27.8	NEAR THE EAST COAST OF HONSHU, JAPAN
MAP	5.9	2011/03/11 12:12:53	38.052	142.542	21.6	NEAR THE EAST COAST OF HONSHU, JAPAN
MAP	5.1	2011/03/11 12:04:16	36.351	142.700	38.4	OFF THE EAST COAST OF HONSHU, JAPAN
MAP	5.5	2011/03/11 11:56:16	36.356	141.504	39.4	NEAR THE EAST COAST OF HONSHU, JAPAN
MAP	5.1	2011/03/11 11:54:02	36.982	142.535	45.0	OFF THE EAST COAST OF HONSHU, JAPAN
MAP	5.8	2011/03/11 11:46:47	36.034	141.055	47.5	NEAR THE EAST COAST OF HONSHU, JAPAN
MAP	5.8	2011/03/11 11:44:28	36.709	142.231	31.0	OFF THE EAST COAST OF HONSHU, JAPAN

Hace 8 min

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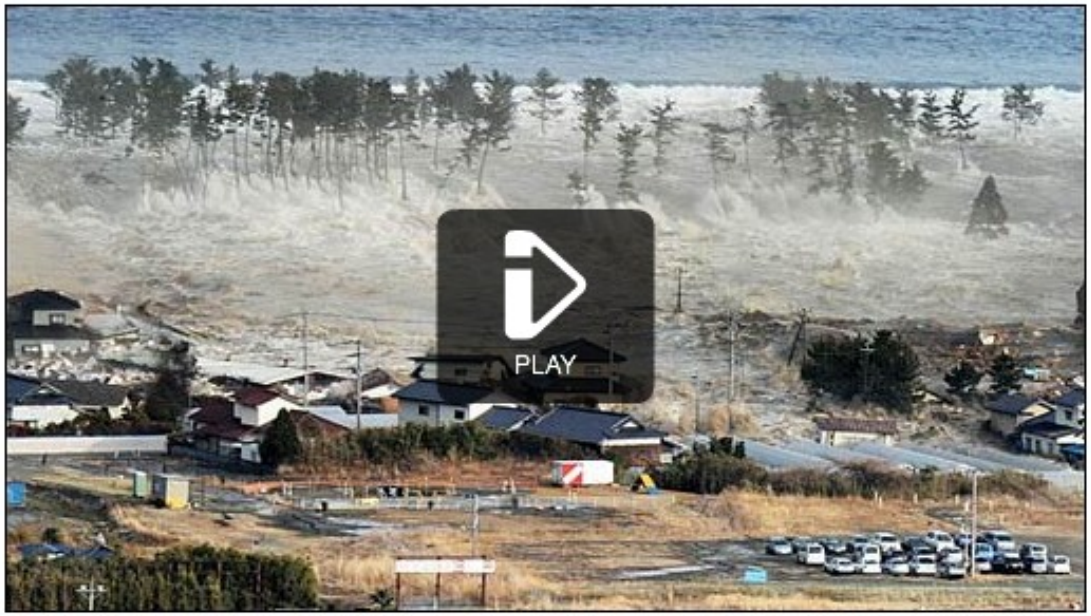
Alerta de tsunami en todo el Pacífico tras el terremoto en Japón

Redacción
BBC Mundo



ÚLTIMAS NOTICIAS

Hace 9 min Terremoto de Japón: la muertos asciende a 40

Hace 27 min Chile: preparan evacuac Isla de Pascua ante posi tsunami

Hace 42 min La Unión Europea le exig Gadafi abandonar el pod

Hace 58 min Japón: falla sistema de enfriamiento en planta n tras el sismo

Pulse en el botón de actualizar (refresh o r su navegador para renovar el contenido de Noticias.

PRINCIPALES NOTICIAS

Alerta de tsunami e Pacífico tras el terr en Japón

bit.ly search your bit.ly links Shorten & Share Analyze Public Timeline hmason

http://bit.ly/eh1hiL

BBC Mundo - Noticias - Alerta de tsunami en todo el Pacífico tras el terremoto en Japón

169 Clicks

All clicks on the aggregate bit.ly link bit.ly/eh1hiL

Long Link: http://www.bbc.co.uk/mundo/noticias/2011/03/110311_alerta_tsunami_aw.shtml

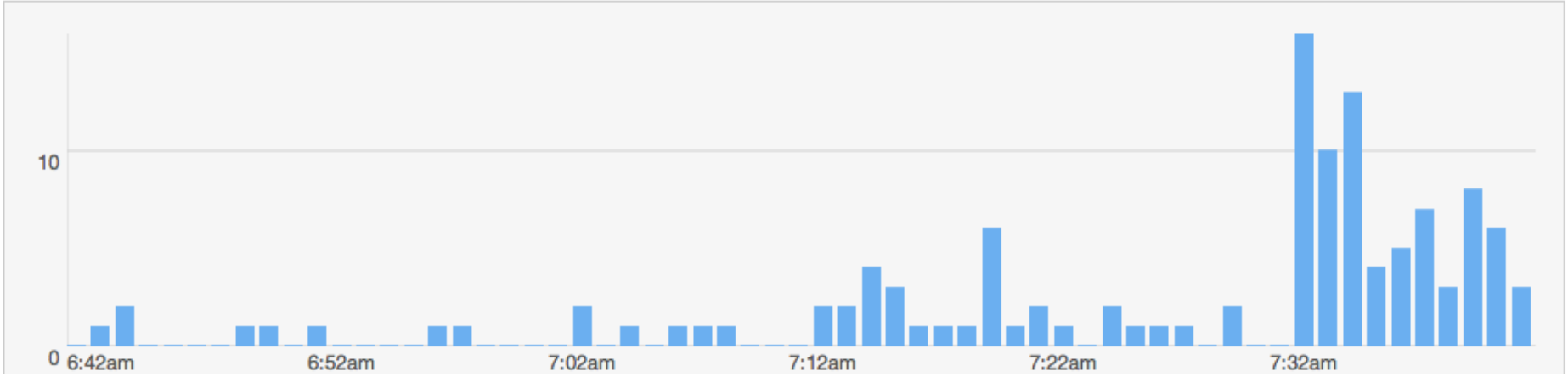
Conversations: Tweets **401**; Shares **1251**, Likes **237**, Comments **431**; Comments on Page **0** View All

Share / Copy Link: Share Copy

http://bit.ly/eh1hiL.qrcode

120 Click(s) on this link since 6:42

Past hour



Massive quake triggers tsunami, fires in Japan

Massive earthquake hits Japan

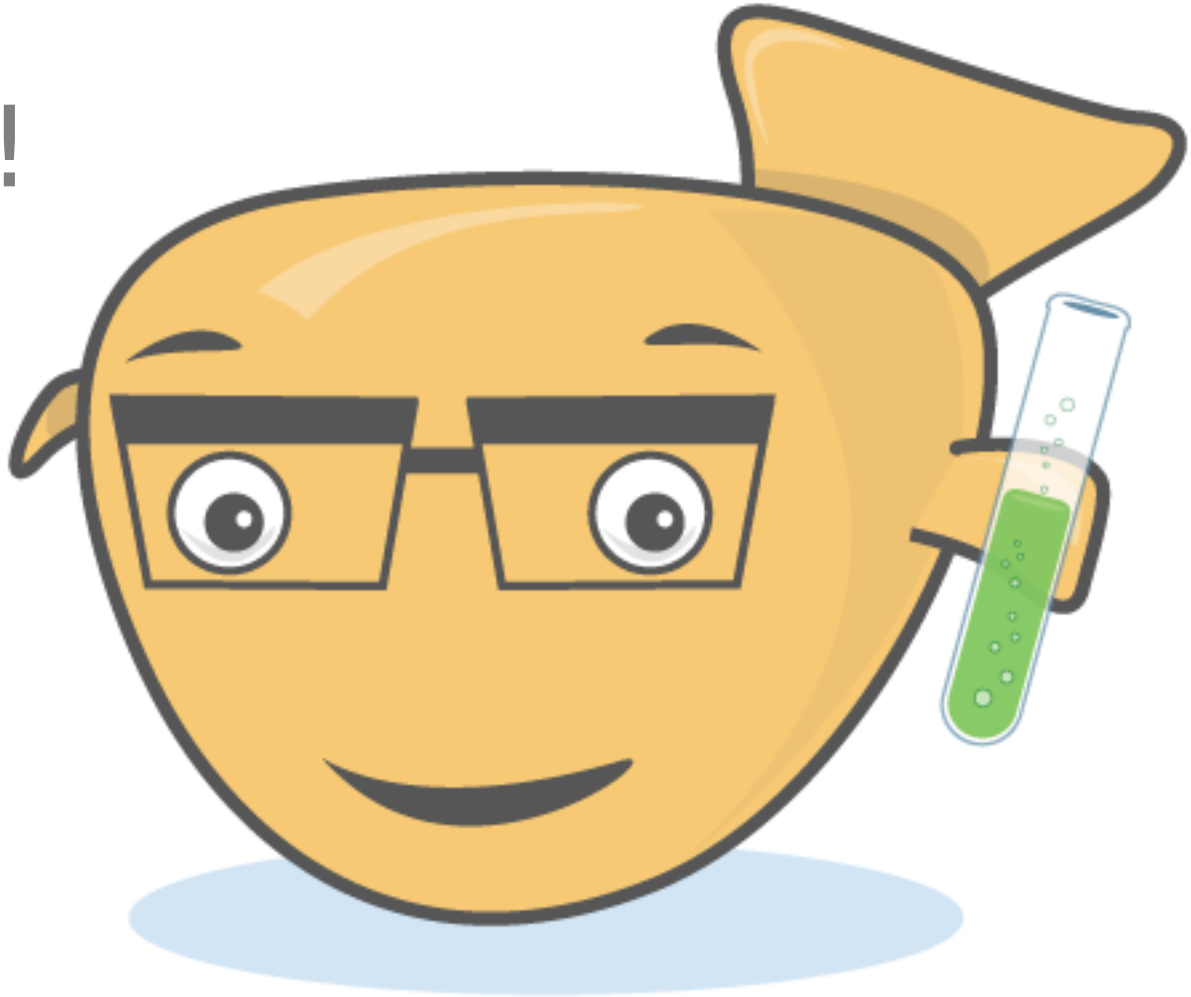
Residents ordered to evacuate after Japan nuke plant is rocked by giant earthquake

Move comes after state of emergency declared at two nuclear facilities

Jump to text
The Japanese government has issued an evacuation order to thousands of ...

Below: Text Photos Discussion Related

Thank you!



h@bit.ly
@hmaso
n

http://github.com/hmason
http://www.hilarymason.com