

RSACONFERENCE2014

FEBRUARY 24 – 28 | MOSCONE CENTER | SAN FRANCISCO

Share.
Learn.
Secure.

Capitalizing on
Collective Intelligence

Malicious Acrobatics on Social Media

SESSION ID: HUM-R04A

Jason Ding

Research Scientist
Barracuda Networks
@dingzj1



Big Social Data Incidents in 2012 - 2013

- ◆ Dec 2013: Snapchat – 4.6M Usernames, Phone #s
- ◆ Dec 2013: Facebook, Google, Yahoo!, Twitter – 320K Email Accounts
- ◆ Oct 2013: Adobe – 130M User Emails, Passwords
- ◆ June 2013: Facebook – 6M User Emails, Phone #s
- ◆ Apr 2013: LivingSocial – 50M Users Impacted
- ◆ Apr 2013: Twitter – @AP hacked, \$100B valuation drop in stock market
- ◆ Feb 2013: Twitter – 250K User Passwords Reset
- ◆ June 2012: LinkedIn – 6.5M Passwords

Goal and Objectives

- ◆ Understand
 - ◆ Current Trends of Malicious Attacks on Social Networks
 - ◆ How to Defend Yourself?



User Stats


- ◆ Facebook (2013)
 - ◆ Monthly active users: 1.23 billion
 - ◆ Fake or Misclassified Users: 5.5% ~ 11.2% or 68M ~ 138M
- ◆ Twitter (2013)
 - ◆ Monthly active users: 241M (but estimated* 900M+ registered)
 - ◆ Fake Users: 5% (~10% estimated by researchers)


* Estimated values retrieved from <http://twopcharts.com/twitteractivitymonitor> on Feb. 19, 2014


Facebook: Fake Accounts

Nadia Wills
His worked at Delaware · Studied at Delaware State University · Lives in Dover, Delaware · From Dover, Delaware · Born on March 15, 1987




Work and Education

Employers  Delaware

College  Delaware State University

High School  Delaware Hayes High School

Arts and Entertainment

Music:  Jay-Z  Katy Perry  Lady Gaga

Activities and Interests

Other: [Shop Seng Online](#)

Basic Information


Interested in: Men


Sex: Female

<http://www.facebook.com/profile.php?id=100002084713313>


Megan Hill
Studied at North Carolina State University · Lives in Raleigh, North Carolina · In a relationship · From Raleigh, North Carolina · Born on December 20, 1987

Work and Education

College  North Carolina State University

High School  North Carolina School of Science and Mathematics

Arts and Entertainment

Music:  Justin Timberlake

Basic Information

Interested in: Men and Women

Relationship Status: In a relationship

Sex: Female

<http://www.facebook.com/profile.php?id=100002163101571>

www.facebook.com/media/set/?set=a.152755601506374.31706.15128998496269&type=1

facebook

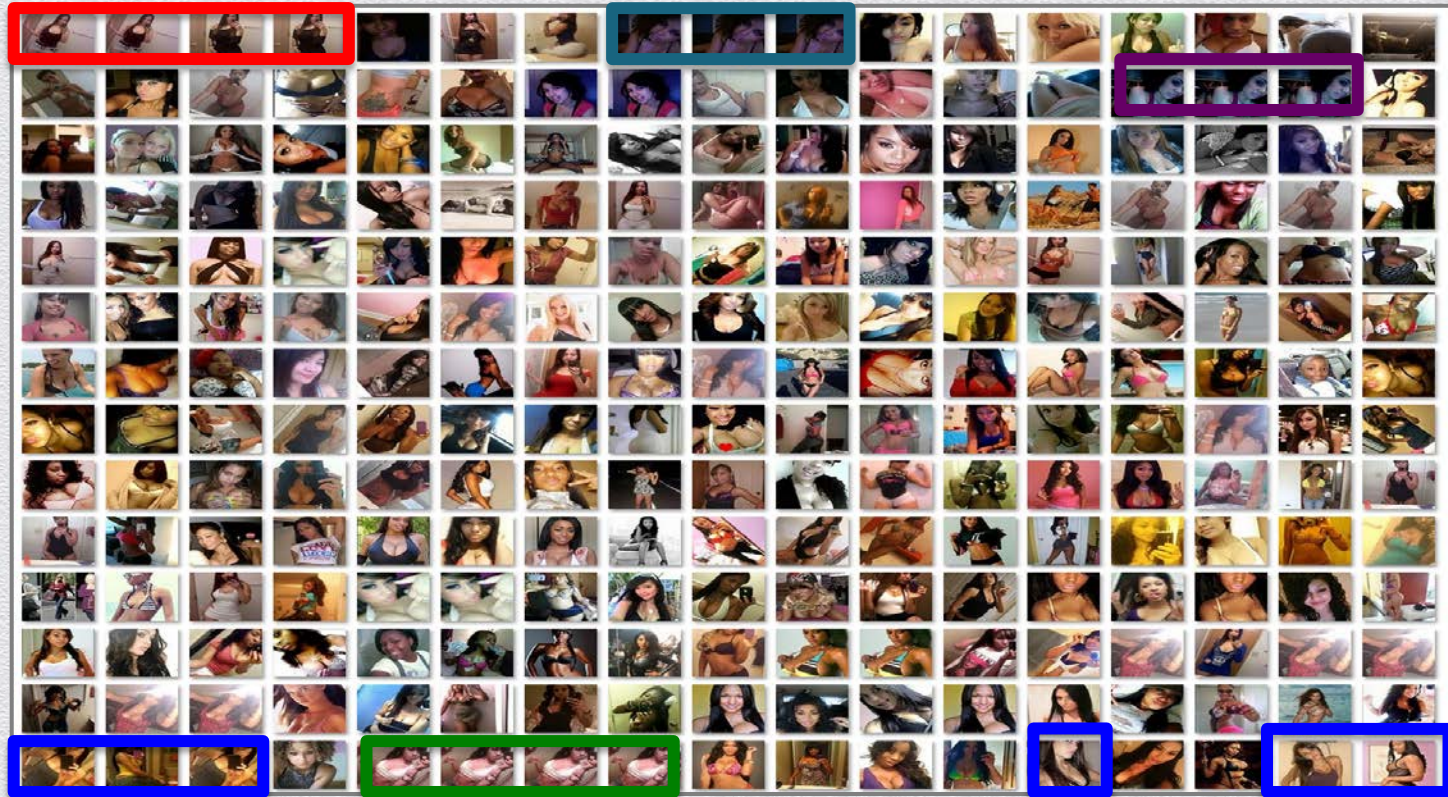
Nike Air Jordan Retro 11 Concord 2011 FOR SALE \$99.99
By NIKE Jordans (Albums) · Updated last Friday · Taken at <http://on.fb.me/NIKEJordans>

Friday, January 27, 2012 at 6:14am

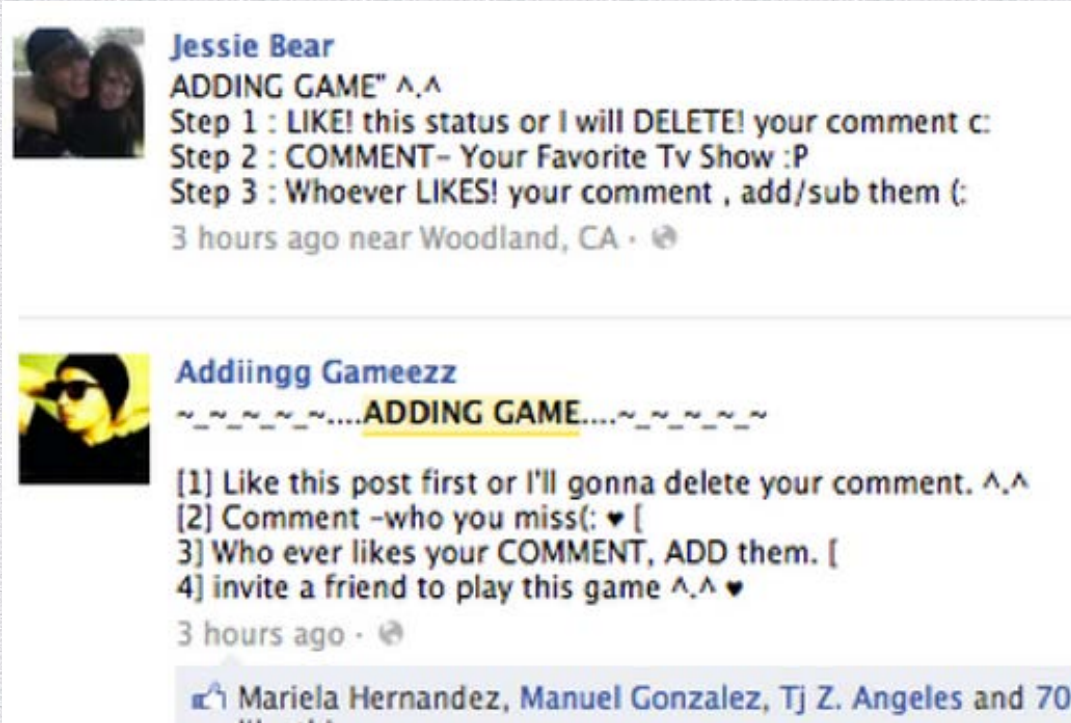
In This Album (3866) See All

Sponsored Create an Ad

Facebook: Fake Accounts



Facebook: Adding Games



Jessie Bear
ADDING GAME" ^.^
Step 1 : LIKE! this status or I will DELETE! your comment c:
Step 2 : COMMENT- Your Favorite Tv Show :P
Step 3 : Whoever LIKES! your comment , add/sub them (:
3 hours ago near Woodland, CA · 🌐

Addiingg Gameezz
~::~~::~~....**ADDING GAME**....~::~~::~~
[1] Like this post first or I'll gonna delete your comment. ^.^
[2] Comment -who you miss(: ♥ [
[3] Who ever likes your COMMENT, ADD them. [
[4] invite a friend to play this game ^.^ ♥
3 hours ago · 🌐

Mariela Hernandez, Manuel Gonzalez, Tj Z. Angeles and 70



facebook Adding' Games' www.facebook.com/OfficialAddingGames

Search for friends, places and things

Kyle Taylor Find

@thatkid_albert
dopekiidsupreme.tumblr.com

Adding' Games'
30,384 likes · 9,472 talking about this

Like Message

Professional Sports Team
Follow Me on ---> TWITTER : https://twitter.com/#!/Thatkid_Albert INSTAGRAM : Thatkid_Albert
TUMBLR : <http://dopekiidsupreme.tumblr.com/>

About Photos Likes

Highlights

Adding' Games'
about an hour ago · 🌐

- Adding Game -

1. Like this Status
2. Comment With - YOUR RACE
3. Whoever Likes it ' ADD THEM !

Unlike · Comment · Share

👍 You and 296 others like this.

View all 716 comments

Write a comment...

Adding' Games'
16 hours ago via mobile · 🌐

- Adding Game -

1. Like this Status
2. Comment With - GOOD NIGHT
3. Whoever Likes it ' ADD THEM !

Like · Comment · Share

👍 228 people like this.

View all 491 comments

Adding' Games'
3 hours ago · 🌐

Like

#Team'Albert
Public Figure

Adding' Games'
3 hours ago · 🌐

- Adding Game -

1. Like this Status
2. Comment With - GOOD AFTERNOON
3. Whoever Likes it ' ADD THEM !

Unlike · Comment · Share

👍 You and 333 others like this.

View all 695 comments

Write a comment...

Adding' Games'
18 hours ago via mobile · 🌐

Follow Me On Instagram Ladies !

Thatkid_albert <---

Example: Facebook Spam App Auto-creation

STEP 1

First Quest Unlocked

Click will pop to adding new apps

love

Step 1: Edit the tags, one per line.

- The only possible answers are YES or NO.
- You must use the word FRIEND in your question but the name of a friend will be added later.
- Create at least 5 questions
- Examples:
 - Do you think FRIEND is happy?
 - Would FRIEND ever go fishing?
 - Do you think FRIEND likes sushi?
- Enter question HERE one per row

Make 5 questions with FRIEND in each line

Next

STEP 2

love

41 Coins

Step 2: Search for Application Logo

love heart

Pick a Logo:

Next

STEP 3

Final Step: Generate Facebook App ID and Secret

Use the "Create an Application" wizard to generate an App ID and App Secret.

Create an Application

Name your quiz anything you want.

Site name: My Quiz

Site URL: ?

Type in just a question mark.

Copy and Paste App ID and Secret:

App ID: [Redacted]

Secret: [Redacted]

Language: English

Copy the App ID and App Secret

Finish

Solutions to Facebook Attacks

- ◆ Do not friend sexy people on Facebook
 - ◆ Let me friend them; that is my job 😊
- ◆ Do not click freebies or play games or approve infamous Apps
 - ◆ Don't give your keys to spammers

Twitter: Underground Market for Fake Followers

- ◆ Booming market
 - ◆ Hackers
 - ◆ Sellers/Middle Men
 - ◆ Abusers/Buyers
- ◆ Hackers/sellers earn \$1000/day
- ◆ Fake accounts: 1 in 10
- ◆ Market: 10 – 100 millions



#RSAC

Twitter: Lots of Abusers/Buyers



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Twitter: More Sophisticated Fake Accounts

- ◆ Fake duplicated accounts found: 62,982
- ◆ Analyzed from latest 100K followers of a “famous” Twitter account



Real account



Fake account 2

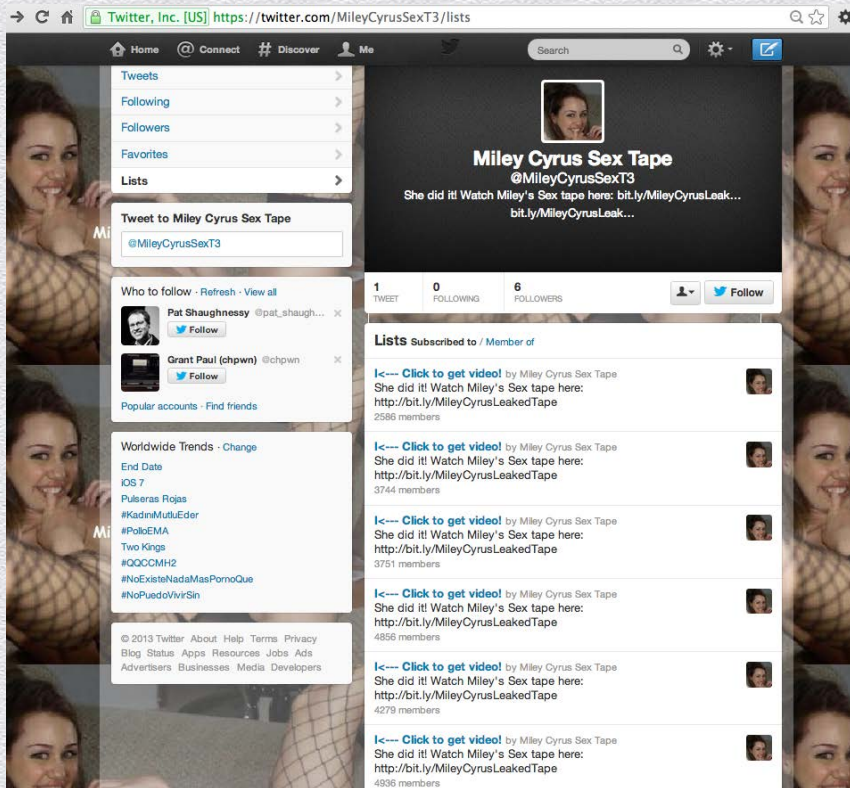


Fake account 1



Fake account 3

Twitter: Adding Lists to Spam




20 LISTS
with over
90,000
in PEOPLE
1 DAY

Solutions to Twitter users

- ◆ Do not buy Twitter Followers or pay for Tweets
 - ◆ Not worth it for your business
- ◆ Do not easily trust Twitter users with big number of fans
 - ◆ Many might be fake
 - ◆ Check them with detection engines
- ◆ Do not trust regular Twitter users
 - ◆ They look so real, but still maybe robots

LinkedIn: Buy Connections or SocialKlepto Tool


Show: **Recommended** High Rating Express Gigs With Video New 2324 results



Get 1000+ LinkedIn Connections To Your Profile

by samueleeto 2 From Australia 16 Joined about 3 years ago Delivers in 5 days


★★★★★ 136 Votes [ORDER NOW \\$5](#)



Get you 4000 to 12500 LinkedIn LIONS connections

by bytoping 2 From India 16 Joined 5 months ago Delivers in 3 days


★★★★★ 38 Votes [ORDER NOW \\$5](#)



Give you 40 best tips on how to improve your LinkedIn profile

by bestquality 2 From India 16 Joined about 3 years ago Delivers in 5 days


★★★★★ 45 Votes [ORDER NOW \\$5](#)



Help you improve your LinkedIn profile

by blachi 2 From Israel 16 Joined 29 days ago Delivers in 1 day

★★★★★ 17 Votes [ORDER NOW \\$5](#)



Send you 9800 LinkedIn Contacts from Real People


by directoryman 2 From Nigeria 16 Joined 6 months ago Delivers in 1 day

★★★★★ 74 Votes [ORDER NOW \\$5](#)

LinkedIn Klepto

Add a Name and Picture

Alonzo Reyna




Add a Summary

•Full cycle recruiter with great breadth and depth in staffing and well versed with staffing process, best practices and metrics for technology market segments- Software and Semiconductor •Superior relationship building capabilities at all level of workforce •Broad and well established personal network with exceptional track record of candidate closure •Organized, self-starter and a great team player •Ability to thrive in a fast and rapidly changing environment •Excellent communication, negotiation, presentations, multi-tasking, time management skills and building relationships with customers and partners •Experience in recruiting software, hardware & marketing candidates using web based and direct source recruiting


Add a Position

Title: Managing Partner - Global Executive Search - Technology - Telecom - Outsourcing Verticals
Company: Professional Heights
Summary: Seasoned Executive Search professional with 21 year



Add an Education History

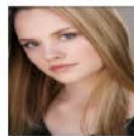
School Name: University of Southern California
Field of Study: Computer Engineering
Degree: Master of Science
Activity: Lavoisier fellowship (French Ministry of Foreign Affairs), Sagem scholarship (private research grant)
End Date: 1992-01-01



[Create Bait Account](#)

LinkedIn: Company Espionage

Bait Accounts	#Invitation	#Accept	#Stream
 Savanna Julianna Personal Trainer/Actor, Entertainment Organizer	28	15 53.57%	8 28.57%
 Naomi Dube Intellectual Property Attorney in a full service law firm	28	17 60.71%	9 32.14%
 Finn Aliyah EVP and CTO of a Security Cloud Company	28	7 25.00%	3 10.71%
 Esmeralda Foster Bank Manager and Business Department Director	28	9 32.14%	5 17.86%

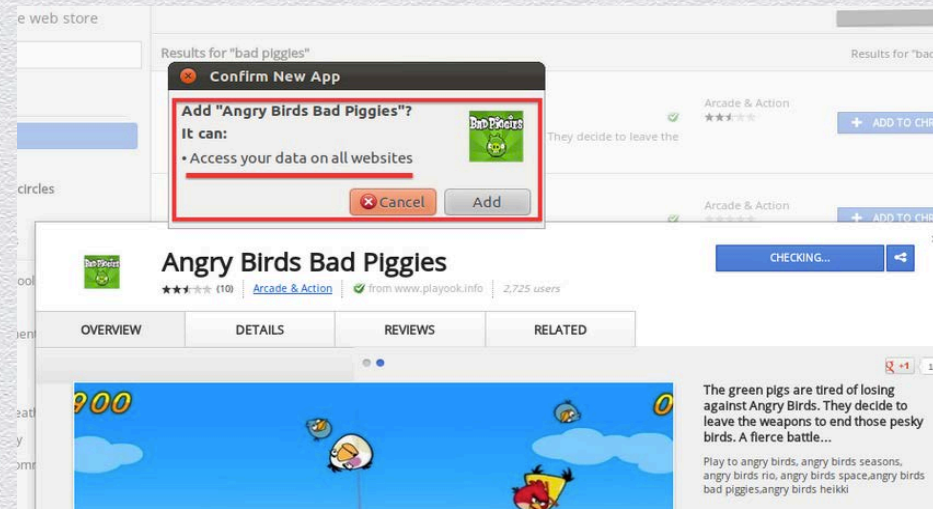
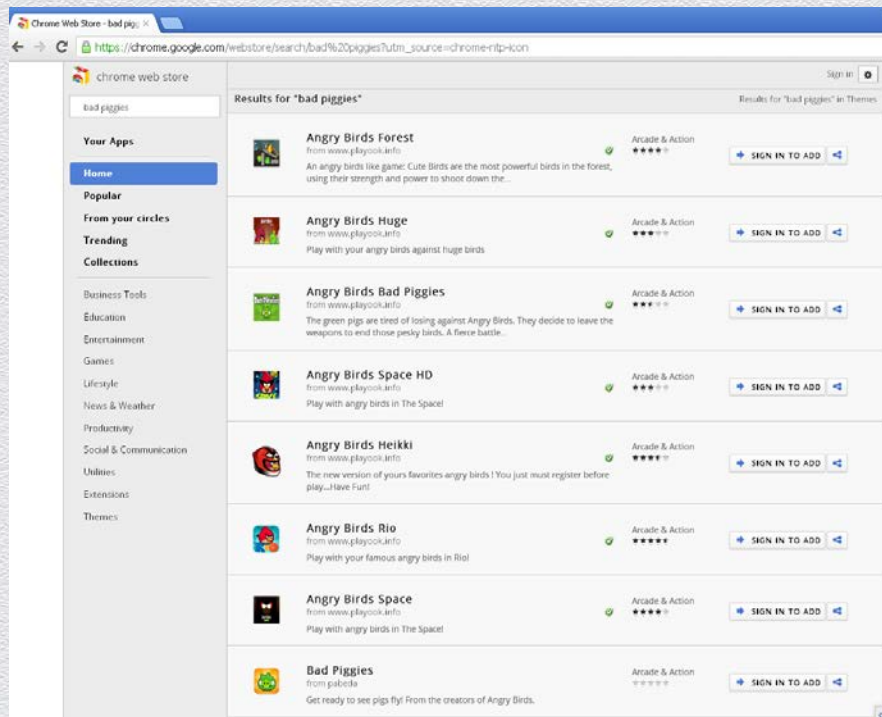


Taylor Wyman
Regional Sales
Director

Refresh Stream

Feb-21 Taylor connected [redacted] **Recruiter, Sourcer**
Feb-21 Taylor connected [redacted] **VP and Chief Information Security Officer at First National Nebraska Inc.**
Feb-20 Taylor connected [redacted] **VP of North American Sales at Authentify, Inc.**
Feb-19 Taylor connected [redacted] **Technical Architect at Sprint**
Feb-18 Taylor connected [redacted] **Systems Support Analyst at MoneyGram International**
Feb-08 Taylor connected [redacted] **Director Corporate Procurement IT Strategic Sourcing at Express Scripts, Inc.**
Feb-07 Taylor connected [redacted] **Sr. Sales Director - Midwest Region at LexisNexis**
Feb-07 Taylor connected [redacted] **Sr. Technical Specialist at BJC Healthcare**
Feb-05 Taylor connected [redacted] **Security Architect at MoneyGram International**
Feb-05 Taylor connected [redacted] **Information Security Leader**
Feb-05 Taylor connected [redacted] **Account Executive at Fishnet Security, Inc.**
Feb-25 Taylor connected [redacted] **VP - Information Security at Western Union**
Feb-25 Taylor connected [redacted] **AVP Specialty Finance at One Nevada Credit Union**
Feb-25 Taylor joined Outsourcing Forum for Contact Center Professionals
Feb-25 Taylor connected [redacted] **SVP/Group Head - Fraud Management Solutions at MasterCard**

Google: Spam Apps on Chrome Web Store



Google: Spam Apps on Chrome Web Store

- ◆ 40+ popular websites injected with ads
- ◆ Oct 2012: 82K users affected within a week
- ◆ Jan 2014: 180K users affected by 12 extensions



chrome.angrybirds.com
heikki.angrybirds.com
poppit.pogo.com
chrome.monsterdashgame.com
www.hitoyunlaroyyna.com
www.frpturk.com
chrome.funnygames.org
msn.com
yahoo.com
imdb.com
www.ebay
myspace.com
youporn.com
xvideos.com
gameboysite.com
www.pinkemu.com
www.silverstoregames.com
disney.go.com

Take Away Points

- ◆ Social Networks are booming – Spammers know this
 - ◆ Underground market on fake social accounts: 100+ million dollars
- ◆ Be vigilant on social networks
- ◆ Do not trust all users on social networks

Resources and Contact

- ◆ More details at <http://barracudalabs.com>

- ◆ <http://barracudalabs.com/2013/11/q4-2013-update-on-twitter-abuse-trends-and-stats/>
- ◆ <http://barracudalabs.com/2012/08/the-twitter-underground-economy-a-blooming-business/>
- ◆ <http://barracudalabs.com/2013/07/twitter-underground-economy-still-going-strong/>
- ◆ <http://barracudalabs.com/fbinfographic/>
- ◆ <http://barracudalabs.com/2012/10/free-web-version-of-rovios-bad-piggies-installs-ad-injector-into-over-82k-chrome-browsers/>
- ◆ <http://blog.spiderlabs.com/2013/12/look-what-i-found-moar-pony.html>

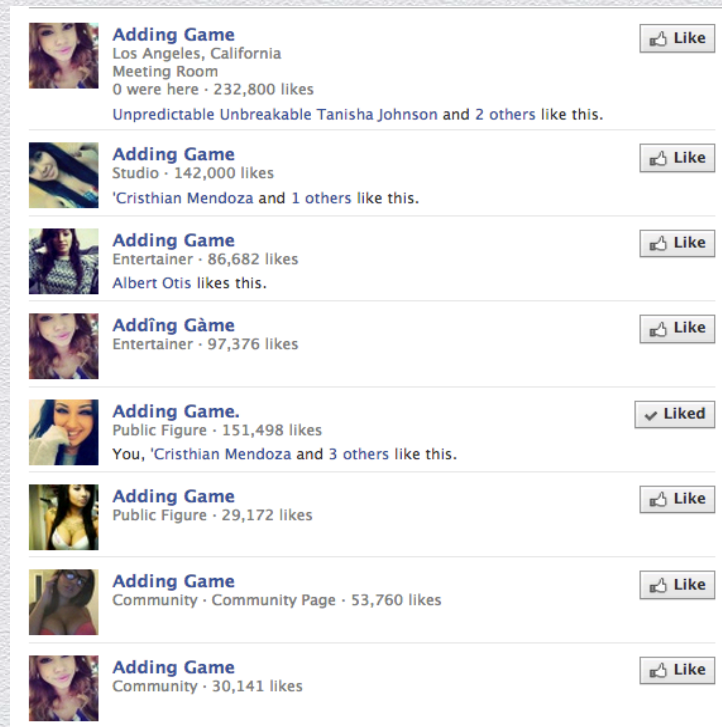
- ◆ Contact Info

Jason Ding, jdining@barracuda.com, @dingzj1

Appendix

- ◆ Appendix is for reference or more examples, won't be discussed during the talk (due to time limitation)

Facebook: Adding Games (2)



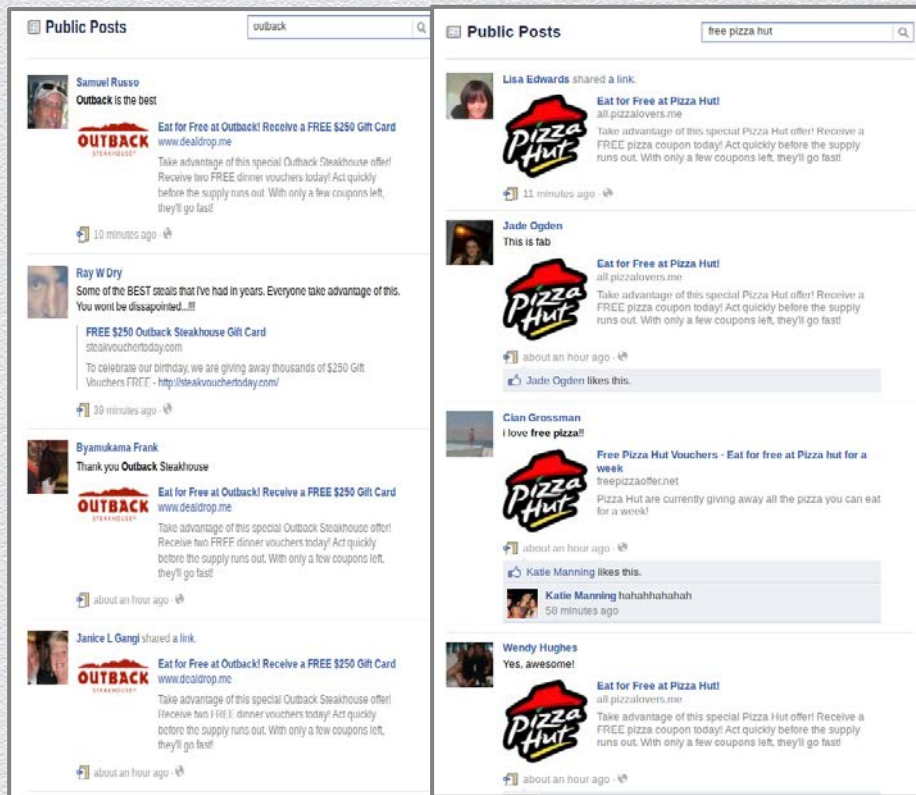
This screenshot shows a list of search results for the game "Adding Game" on Facebook. Each result includes a profile picture, the game name, location, meeting room, number of likes, and a list of people who liked it. The results are as follows:

- Adding Game**
Los Angeles, California
Meeting Room
0 were here · 232,800 likes
Unpredictable Unbreakable Tanisha Johnson and 2 others like this.
- Adding Game**
Studio · 142,000 likes
'Cristhian Mendoza and 1 others like this.
- Adding Game**
Entertainer · 86,682 likes
Albert Otis likes this.
- Adding Game**
Entertainer · 97,376 likes
- Adding Game.**
Public Figure · 151,498 likes
You, 'Cristhian Mendoza and 3 others like this.
- Adding Game**
Public Figure · 29,172 likes
- Adding Game**
Community · Community Page · 53,760 likes
- Adding Game**
Community · 30,141 likes



This screenshot shows the Facebook profile page for the game "Adding Game". The page features a cover photo with the text "for Marriage" and a profile picture of a young boy. The main headline reads "You're 1 year older than me. Don't treat me like I'm 5." with 787,902 likes and 767,969 people talking about it. The page includes sections for "Community", "About", "Highlights", "Recent Posts by Others", and a "Post" section with a "Write something..." prompt. The "Recent Posts by Others" section shows several posts from users like Jordan Andersen, Mike Esparza, and Krystal Marie Chisholm, all sharing links to the game.

Facebook: Affiliate Spam Campaign & Click-jacking



The left screenshot shows a Facebook search for 'outback'. It displays several public posts, all of which are identical affiliate links for Outback Steakhouse. Each post claims to offer a 'FREE \$250 Gift Card' and 'two FREE dinner vouchers today' for a limited time. The posts are from various users, including Samuel Russo, Ray W Dry, Byamukama Frank, and Janice L Gangi. The right screenshot shows a Facebook search for 'free pizza hut'. It displays public posts from Lisa Edwards, Jade Ogden, and Wendy Hughes, all of which are identical affiliate links for Pizza Hut. Each post claims to offer a 'FREE pizza coupon today' for a limited time. The posts are from various users, including Lisa Edwards, Jade Ogden, and Wendy Hughes.




The top screenshot shows a Facebook post from Scott [redacted] that says 'likes a link.' The link preview shows a blurry image of a person and the text 'Dad walks in on daughter... EMBARRASING!!!' from the website 'affairist.com'. The bottom screenshot shows another Facebook post from Scott [redacted] that also says 'likes a link.' The link preview shows a blurry image of a person and the text 'The beautiful Marika Fruscio shows her breasts on Italian TV!' from the website 'marikafnews.altervista.org'. Both posts show the standard Facebook interaction buttons: Like, Comment, and Share.

YouTube: Fake Views


Buy Youtube Views - Quality and Cheap Youtube Views


**Vimeo Views**

**Metacafe Views**

**Dailymotion Views**

**LiveLeak Views**

**Keek Views**

**Soundcloud Followers**

**SoundCloud Plays**

1000	2500	5000	10000	20000	50000	100000	250000	500000	1 Million
YouTube Views	YouTube Views	YouTube Views	YouTube Views	YouTube Views	YouTube Views	YouTube Views	YouTube Views	YouTube Views	YouTube Views
24 Hours !	24 Hours !	2 Days !	3 Days !	4 Days !	5 Days !	6-7 Days	8 - 9 Days	10-14 Days	14-21 Days
\$3	\$5	\$7	\$14	\$28	\$70	\$140	\$300	\$500	\$888
YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>	YouTube Url: <input type="text"/>
Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal	Buy with PayPal

PACK-8

YOUTUBE **\$209**

10,000 Real YouTube Subscribers



\$ 209.00 (USD)

Deliver within 25-28 days
Enter Your Channel URL or Username:

Current number of subscribers:

[Add to Cart](#)



Pinterest: Spamming Pics with Amazon Commission

- ◆ Did This Pinterest Spammer Make \$30,000 in a Month?




10,000 \$5
High Quality
Instagram Followers
Followers.com/social-promo

I will 11,000 Instagram Followers To Any Account Boost Your Followers...



I will add 2000 Twitter followers or 5000 Instagram followers or likes



I will add 2000 Instagram Followers or Twitter Followers

 #RSAC

Tumblr: Porn pictures and Malware

- ◆ Porn is everywhere
- ◆ Facebook Phishing and Malware via Tumblr Redirects



Price List of Fake Social Interactions

Social Platform		Average Price	
Twitter	\$11/1k followers	Instagram	\$14/1k followers
Facebook	\$28/1k likes	Pinterest	\$45/1k followers
Google+	\$84/1k votes	LinkedIn	\$35/1k connections
YouTube	\$4/1k views	SoundCloud	\$14/1k followers or plays
Vine	\$64/1k views	Tumblr	\$49/1k likes
Vimeo	\$4/1k views		