

CS 8803 Social Computing: Background

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Week 1 | August 20, 2014

Resources

- Office hours: 11am – 12 noon Thursday, or by appointment
- Location: TSRB 236

- Teaching Assistant: Joe Gonzales
- Office hours: by appointment
- Location: TSRB 338A
- Email: jgonzales8@gatech.edu

- Class website (including readings):
<http://www.munmund.net/CS8803.html>

- Piazza: piazza.com/gatech/fall2014/cs8803specialtopics

Using Piazza

Term Project Teams

- Start discussing with your classmates about potential team formation
- **Team member information due: September 8**
 - Email me and the TA about team name and members
- **Team project proposal due: September 15**
 - Use the time until September 15 to come to me and discuss project ideas
 - I'll suggest some sample projects in the class on September 8
 - Once you are final, email me and TA and the project proposal (2-3 sentences)

Defining “Social Computing”

What attracts people most is other people.

— William Whyte

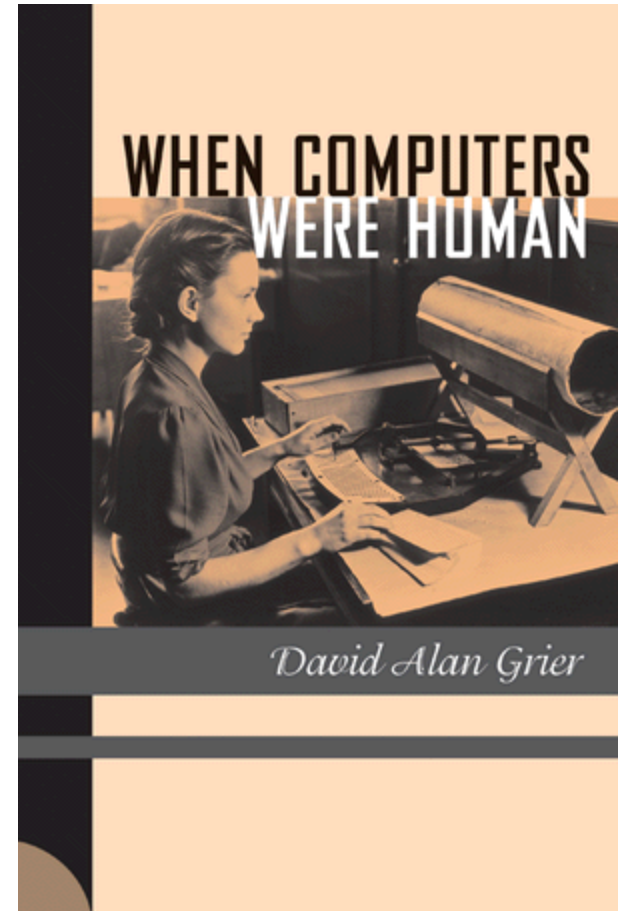
CAN'T COME DEAR

YOU BUSY!

Dominion Telegraph Co.
AGENTS FOR
THE BELL TELEPHONE.

In fact, social computing is not new!

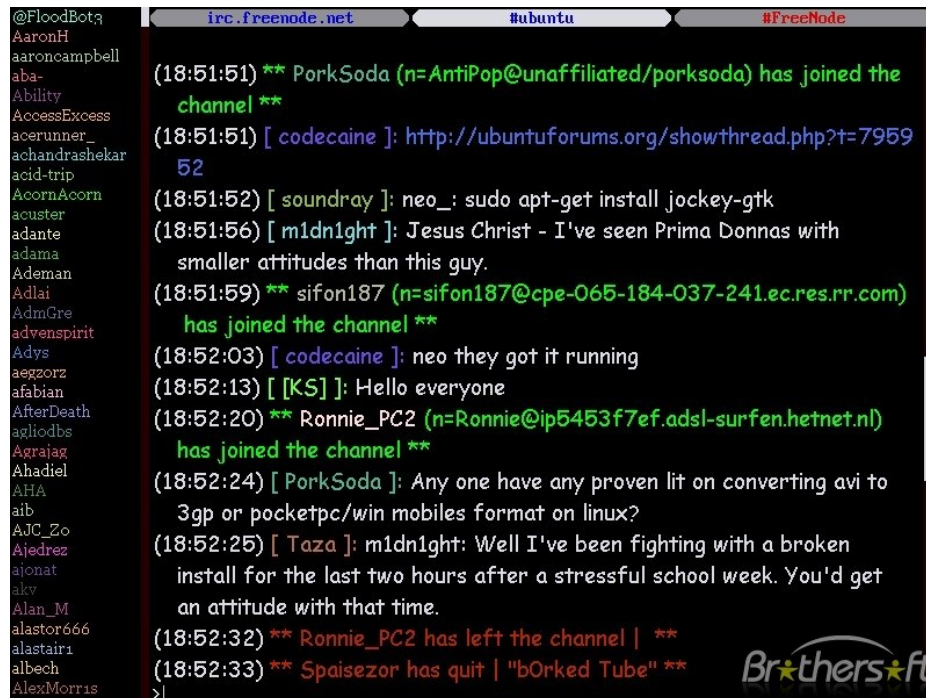
- Clairaut 1758: computed Halley's comet orbit by dividing the numeric computations across three astronomers
- Maskelyne 1760: astronomical almanac with moon positions (for navigation). Two people did the calculations and one verified
- De Prony 1794: hired hairdressers to create logarithmic and trigonometric tables
- 1938: Math Tables Project - employed out-of-work clerks



Social computing on the web: in the late 1990's and early 2000's when digital systems became capable of doing more than simply serving as platforms for sharing online content and conversation


IRCs and forums were early “social”

- IRC – Internet Relay Chat, very early rudimentary application layer protocol that supported text based message exchange
 - Allow file sharing
 - Private and multi-way group chat (latter also known as channels)



```
@FloodBot3
AaronH
aaroncampbell
aba-
Ability
AccessExcess
acerunner_
achandrashekar
acid-trip
AcoornAcorn
acuster
adante
adama
Ademan
Adlai
AdmGre
advenspirit
Adys
aegzor3
afabian
AfterDeath
agliodbs
Agrajag
Ahadiel
AHA
aib
AJC_Zo
Ajedrez
ajonat
aky
Alan_M
alastor666
alastair1
albech
AlexMorris
>
```

```
irc.freenode.net #ubuntu #FreeNode
(18:51:51) ** PorkSoda (n=AntiPop@unaffiliated/porksoda) has joined the
channel **
(18:51:51) [ codecaine ]: http://ubuntuforums.org/showthread.php?t=7959
52
(18:51:52) [ soundray ]: neo_: sudo apt-get install jockey-gtk
(18:51:56) [ m1dn1ght ]: Jesus Christ - I've seen Prima Donnas with
smaller attitudes than this guy.
(18:51:59) ** sifon187 (n=sifon187@cpe-065-184-037-241.ec.res.rr.com)
has joined the channel **
(18:52:03) [ codecaine ]: neo they got it running
(18:52:13) [ [KS] ]: Hello everyone
(18:52:20) ** Ronnie_PC2 (n=Ronnie@ip5453f7ef.adsl-surfen.hetnet.nl)
has joined the channel **
(18:52:24) [ PorkSoda ]: Any one have any proven lit on converting avi to
3gp or pocketpc/win mobiles format on linux?
(18:52:25) [ Taza ]: m1dn1ght: Well I've been fighting with a broken
install for the last two hours after a stressful school week. You'd get
an attitude with that time.
(18:52:32) ** Ronnie_PC2 has left the channel | **
(18:52:33) ** Spaisezor has quit | "bOrked Tube" **
```




IRCs and forums were early “social”

- Forums – message boards or an online discussion site where people can hold conversations in the form of posted messages
 - Mostly one-to-many sharing of content; threaded response structure
 - Messages are often longer than one line of text, and are typically temporarily archived
 - Presence of a “moderator”



The screenshot shows the CTC Forum website interface. At the top, there is a blue header with the CTC logo and the text "CTC Forum Discussion boards hosted by CTC". Below the header, there is a navigation bar with links for "Board index", "User Control Panel", "FAQ", "Members", and "Logout". The main content area displays a table of forum topics under the heading "CYCLING".


	TOPICS	POSTS	LAST POST
 Does anyone know ... ? General cycling advice (NOT technical !) Moderators: Si , Graham , Spam Busters	5879	66775	by Bruce J  07 Feb 2011 05:23 pm
 Bikes & Bits - Technical section For discussions about bikes and equipment. Moderators: Si , Graham , CJ , Spam Busters	7361	74700	by reohn2  07 Feb 2011 06:25 pm
 Campaigning & Public Policy Moderators: Si , Graham , Spam Busters	1211	29005	by Regulator  07 Feb 2011 06:26 pm
 CTC Charity Debate A place to discuss the issues relating to the proposed change in the national CTC's structure. Moderators: Si , Graham , admin , Spam Busters	76	2353	by meic  06 Feb 2011 12:23 pm
 On the road Commuting, Day rides, Audax, Incidents, etc. Moderators: Si , Graham , Spam Busters	2691	46223	by snibgo  07 Feb 2011 04:50 pm
 Lands End to John O'Groats Specific board for this popular undertaking. Moderators: Si , Graham , Spam Busters	955	10423	by petpallion  07 Feb 2011 04:42 pm
 Touring & Expedition Cycle-touring, Expeditions, Adventures, Major cycle routes NOT LeJoG (see other special board) Moderators: Si , Graham , Spam Busters	3025	27900	by snibgo  07 Feb 2011 06:21 pm
 Mountain Biking Anything specific to off-road riding. Moderators: Si , Graham , ctc.org.uk/mtb - Ian , Spam Busters	312	2564	by Steve Kish  07 Feb 2011 04:44 pm
 People, Events & Rides Talk about events & rides. Find companions for your ride. Moderators: Si , Graham , Spam Busters	1392	6537	by drdimi  07 Feb 2011 01:01 am

The advent of modern social computing came when digital systems began to process user-generated content and make use of it for their own purposes – which often involved producing new functionality and value for their users

An early example...

The Girl with the Dragon Tattoo

2,580 Reviews

5 star:		(1,083)
4 star:		(630)
3 star:		(300)
2 star:		(231)
1 star:		(336)

Average Customer Review
★★★★☆ (2,580 customer reviews)

Share your thoughts with other customers

[Create your own review](#)

Search Customer Reviews

Only search this product's reviews [GO](#)

The most helpful favorable review

1,967 of 2,108 people found the following review helpful:

★★★★★ **This Swedish bestseller deserves to be a blockbuster here too.**
A 24-year-old computer hacker sporting an assortment of tattoos and body piercings

The most helpful critical review

590 of 711 people found the following review helpful:

★★☆☆☆ **Less than I expected but still interesting**
Henrik Vanger, an elderly Swedish industrialist has long been receiving the

An early example...

ESP Game Tag a Tune Verbosity Sound Matched

score 600 ESP Game time 1:17
Concentrate...

a What do you see?

taboo words
kids
children

guesses
birthday
cake
mom
mother

party

+ submit ← pass

ESP Game Tag a Tune Verbosity Sound Matched

score 700 ESP Game time 1:12
Concentrate...

What do you see?

taboo words
kids
children

guesses
birthday
cake
mom
mother
party

Matched on: birthday

+ submit ← pass

Where do I find social computing today?

- Places on the web where individuals and groups create and exchange content and engage in person-to-person conversations.
 - blogs and microblogs, forums and message boards, social networks, wikis, virtual worlds, social bookmarking, tagging and news, digital storytelling and scrapbooking, and data, content, image and video sharing, podcast portals, and collective intelligence.
- Facebook, LinkedIn, Twitter, YouTube, Pinterest, Instagram, Snapchat, MySpace, Flickr, WordPress, Blogger, LiveJournal, Wikipedia, Second Life, Reddit, Tumblr

Timeline of Social Computing Platforms

1971 - The first email was delivered.

1979 – Usenet was an early bulletin board that connected Duke University and UNC.

1989 – British engineer Tim Berners-Lee began work on what was to become the World Wide Web.

1997 – SixDegrees.com, AOL, blogging, Blackboard

2001 – Wikipedia

2002 – Friendster

2003 – MySpace, LinkedIn

2004 – Facebook, YouTube

2006 – Twitter

....

Purposes of social computing systems

- Social interaction
 - Twitter, Instagram, blogs, LinkedIn, Google+
- Maintaining friendships/contacts
 - Facebook, Instagram, Twitter, LinkedIn, Google+
- Social curation
 - Reddit, Pinterest, blogs, Twitter, Flickr, YouTube, Google+
- Content sharing
 - Reddit, Instagram, Twitter, Facebook, Tumblr, Pinterest, blogs, Flickr, YouTube
- Q&A, recommendations
 - Twitter, Facebook
- *General goal: Better decision making*
 - new ways to tap into the collective wisdom of the people in our social groups

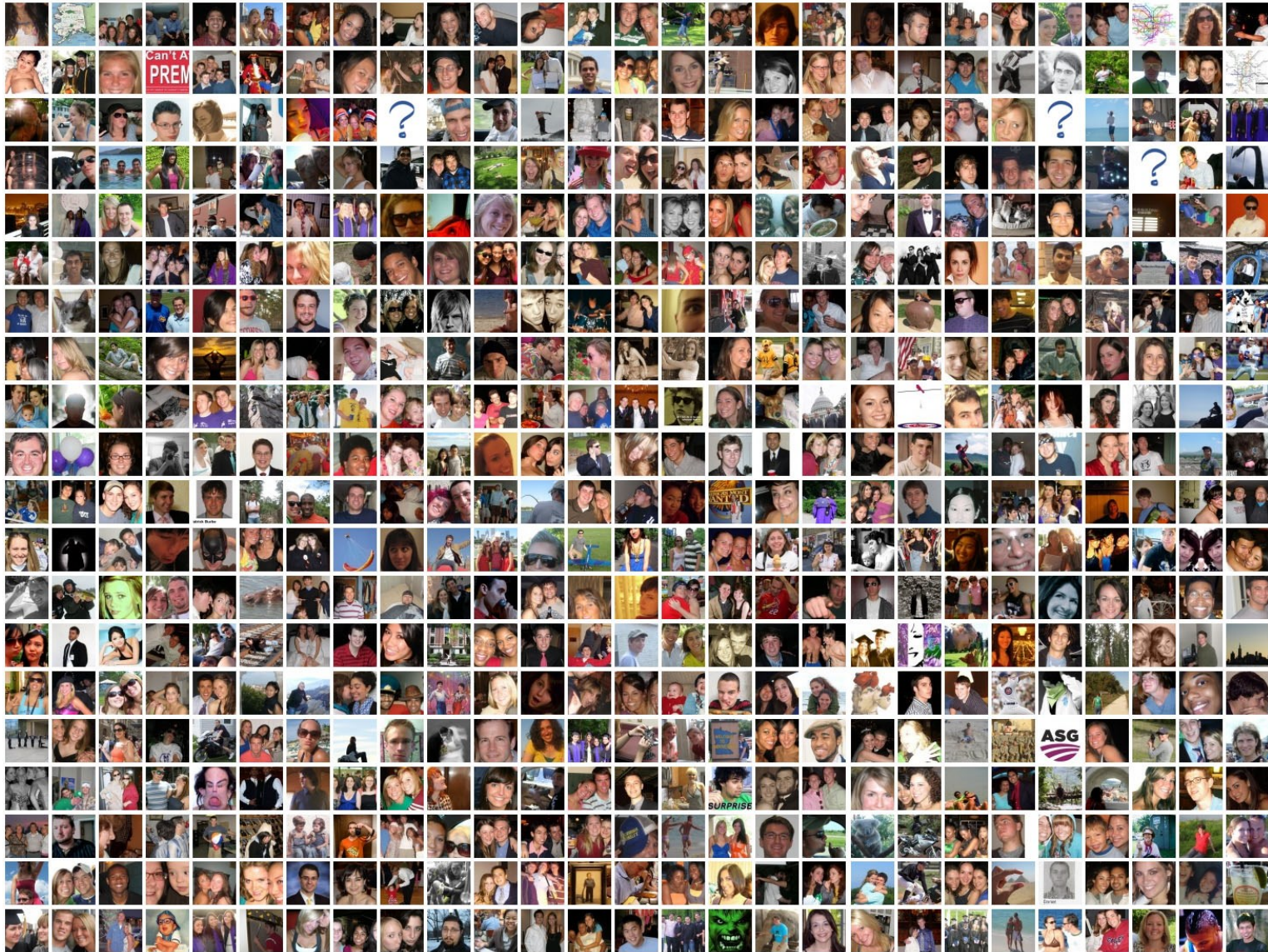
Purposes of social computing systems

- Ubiquity of social computing systems
 - Recent advances in smartphone and tablet technologies, access to tailored, social information anytime, anywhere
- Serve as a “backchannel” to real events
 - People at real-world meetings tapping into an electronic swirl of commentary and interpretation by other participants – the “back channel” [2005]
- Geo-temporal breadcrumbs in the physical world
 - Serendipitous information discovery; smart gadgets for everyday tasks

How to make social computing work?

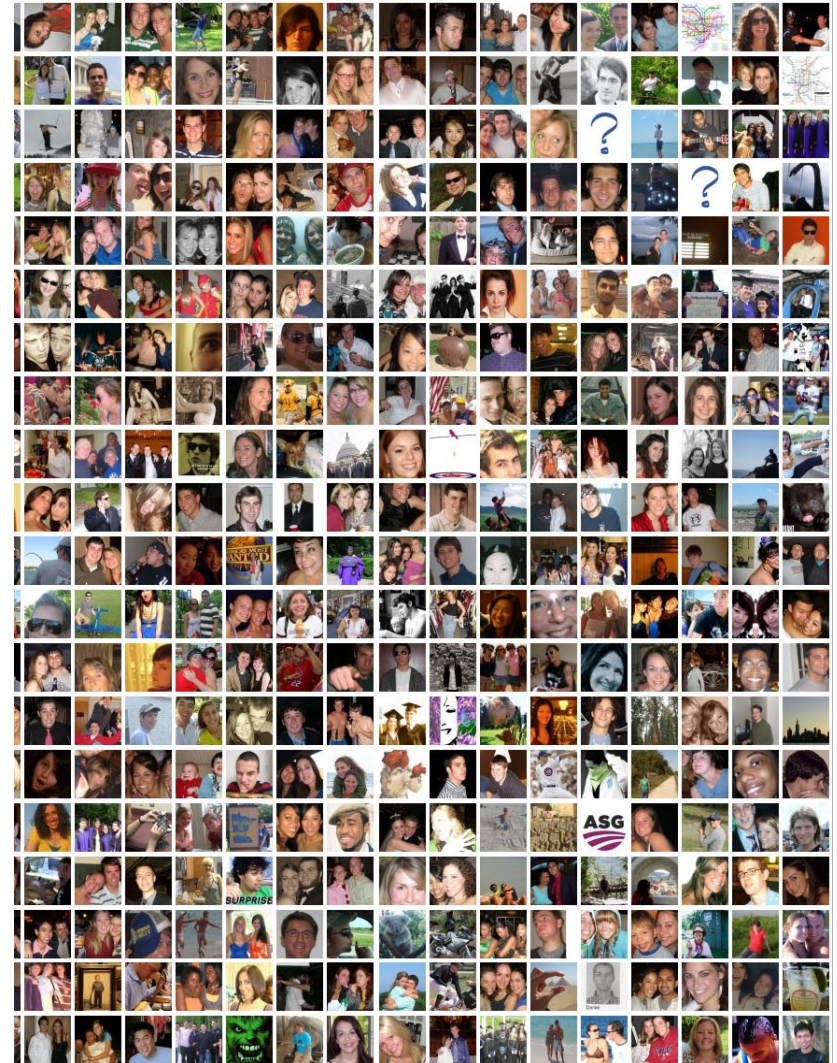
» Keep people engaged

Two central tenets of social computing



People

- Motivating participation
- Maintain existing connections
- Suggest new connections
- Derive utility from connections
- Manage diversity of connections
- Efficient communication modes
- Manage privacy, identity
- Cohorts, communities, groups



Two central tenets of social computing



Emergency Kittens

@EmrgencyKittens



Following

Just helping you pick out some clothes!

↩ Reply ↻ Retweet ★ Favorite ⋮ More



RETWEETS
715

FAVORITES
1,102



8:40 AM - 18 Aug 2014

Flag media

Content

- Constantly streaming source of information
- Noise and quality
- Credibility
- Relevance/significance
- Serendipity/freshness
- Summarization/aggregation
- Spam
- Troll, malicious behavior



Emergency Kittens
@EmrgencyKittens



Following

Just helping you pick out some clothes!

← Reply ↻ Retweet ★ Favorite ⋮ More



RETWEETS
715

FAVORITES
1,102



8:40 AM - 18 Aug 2014

Flag media

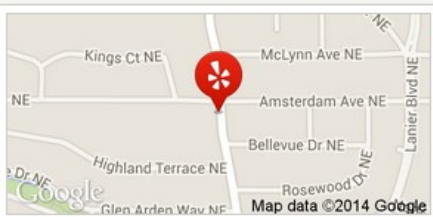
Looking at some examples through these tenets (Yelp)

yelp Find tacos, cheap dinner, Max's Near Atlanta, GA

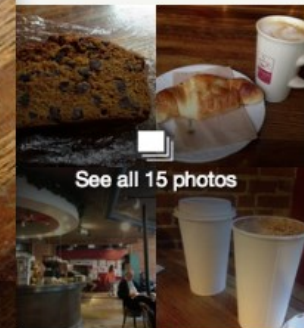
[Home](#) [About Me](#) [Write a Review](#) [Find Friends](#) [Messages](#) [Talk](#) [Events](#)

San Francisco Coffee Roasting Co

★ ★ ★ ★ ★ 92 reviews



1192 N Highland Ave NE
Atlanta, GA 30306
Virginia Highland
[Get Directions](#)
(404) 876-8816
[sfscoffee.com](#)



“Outlets are kinda hard to find but you should only need one, right?”

14 reviews



“I've got a preference for the charm of **Java Monkey** down in Decatur, but SF Roastinf has more space and more light.”

4 reviews



“Delicious mochas, **free wifi**, nice mix of chair/table options, a quiet back patio, and a funky variety of music.”

6 reviews


Today 7:00 am - 10:00 pm **Open now**

Full menu

Price range **Inexpensive**




Looking at some examples through these tenets (Wikipedia)

Create account  Log in



WIKIPEDIA
The Free Encyclopedia

Article **Talk**

Read **Edit** **View history** Search 

Georgia Institute of Technology

From Wikipedia, the free encyclopedia

Coordinates:  33°46′33″N 84°23′41″W﻿ / ﻿33.77583°N 84.39472°W﻿ / 33.77583; -84.39472

The **Georgia Institute of Technology** (commonly referred to as **Georgia Tech**, **Tech**, or **GT**) is a [public research university](#) in [Atlanta, Georgia](#), in the [United States](#). It is a part of the [University System of Georgia](#) and has satellite campuses in [Savannah, Georgia](#); [Metz, France](#); [Athlone, Ireland](#); [Shanghai, China](#); and [Singapore](#).

The educational institution was founded in 1885 as the Georgia School of Technology as part of [Reconstruction](#) plans to build an industrial economy in the post-[Civil War Southern United States](#). Initially, it offered only a degree in mechanical engineering. By 1901, its curriculum had expanded to include electrical, civil, and chemical engineering. In 1948, the school changed its name to reflect its evolution from a [trade school](#) to a larger and more capable [technical institute](#) and research university.

Today, Georgia Tech is organized into six colleges and contains about 31 departments/units, with emphasis on science and technology. It is well recognized for its degree programs in engineering, computing, business administration, the sciences, architecture, and liberal arts.

Georgia Tech's main campus occupies part of [Midtown Atlanta](#), bordered by 10th Street to the north and by [North Avenue](#) to the south, placing it well in sight of the [Atlanta skyline](#). In 1996, the campus was the site of the athletes' village and a venue for a number of athletic events for the [1996 Summer Olympics](#). The construction of the Olympic village, along with subsequent [gentrification](#) of the surrounding areas, enhanced the campus.

Student athletics, both organized and intramural, are a part of student and alumni life. The school's [intercollegiate competitive sports](#) teams, the four-time football national champion [Yellow Jackets](#), and the nationally recognized fight song "[Ramblin' Wreck from Georgia Tech](#)", have helped keep Georgia Tech in the national spotlight. Georgia Tech fields eight men's and seven women's teams that compete in the [NCAA Division I](#) athletics and the [Football Bowl Subdivision](#). Georgia Tech is a member of the Coastal Division in the [Atlantic Coast Conference](#).

Contents [hide]

- 1 History
 - 1.1 Establishment
 - 1.2 Early years
 - 1.3 Modern history

Georgia Institute of Technology



Motto	<i>Progress and Service</i>
Established	October 13, 1885 ^[1]
Type	Public Space grant
Endowment	US \$ 1.71 billion (Fall 2013) ^[2]
President	George P. "Bud" Peterson ^{[3][4]}
Provost	Rafael L. Bras ^[5]
Dean	John Stein ^[6]
Academic staff	5,126 academic and research (Fall 2012) ^[7]

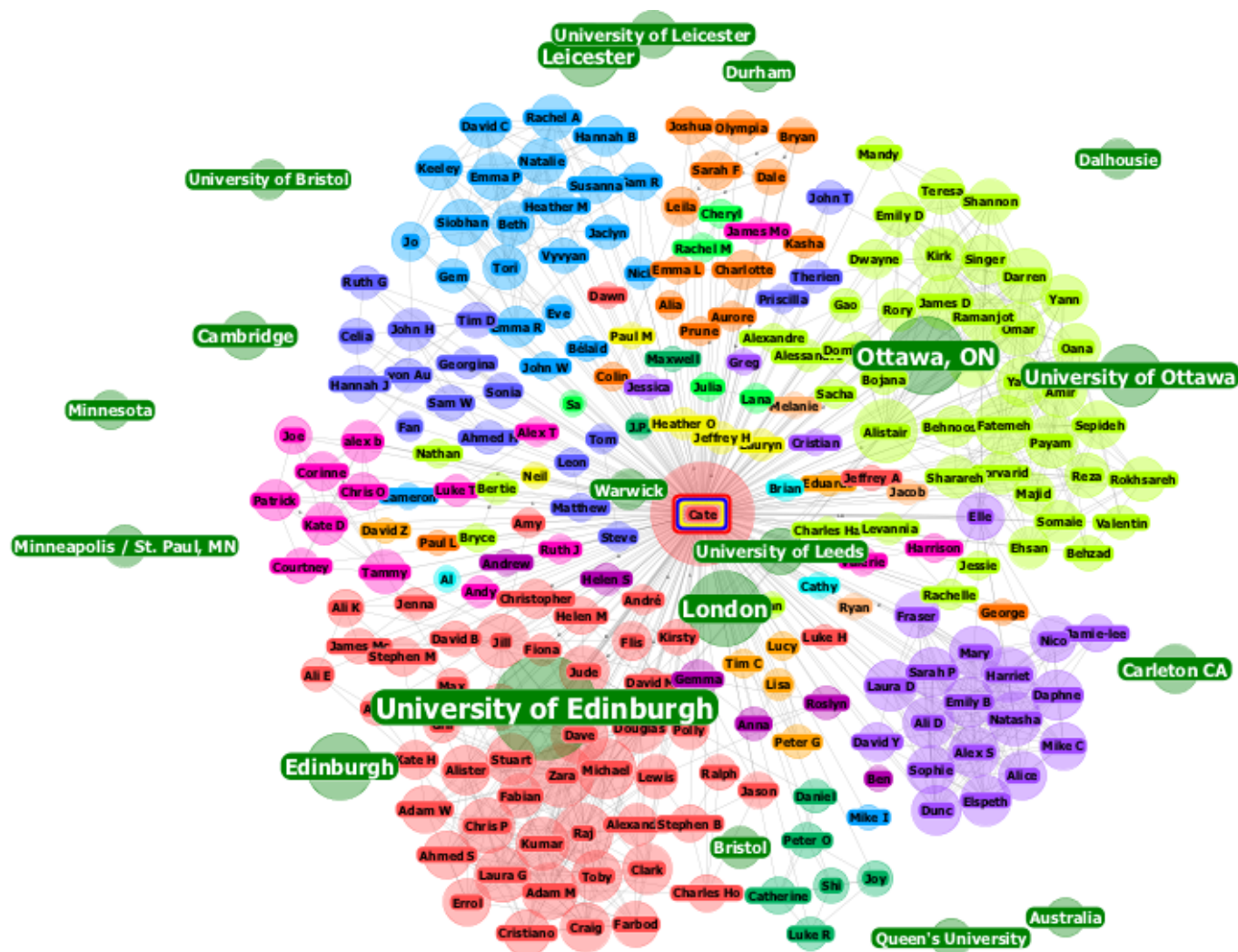
Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikimedia Shop

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page


Print/export
Create a book
Download as PDF
Printable version

Looking at some examples through these tenets (Facebook)




Looking at some examples through these tenets (reddit)

MY SUBREDDITS FRONT - ALL - RANDOM | GIFS - NOTTHEONION - FUNNY - MUSIC - ASKSCIENCE - IAMA - SPACE - FUTUROLOGY - WORLDNEWS - MOVIES - AWW - GAMING - SHOWERTHOUGHTS - BOOKS - DIY - SCIENCE - NEWS - ART - TELEVISION - TODAYILEARNED - DOCUMENTS - MORE »

 **CATS** **comments** related

want to join? login or register in seconds | English

1469  **Farm cats don't get much cuter than this. Reddit, meet Disco! :) (l.imgur.com)**
submitted 22 hours ago by Cala_Mari
23 comments share

all 23 comments

Sorted by: best

[-] **tandembike** 15 points 19 hours ago
Did... did you steal my cat?
permalink

[-] **lynxSnowCat** 5 points 13 hours ago
Just like your comment, I am reasonably certain there is more than one cat.
permalink parent

[-] **tandembike** 14 points 19 hours ago
Did... did you steal my cat?
permalink

[-] **Cala_Mari** [S] 10 points 19 hours ago
No, I did not steal your cat x6
permalink parent

[-] **lordofthederps** 4 points 19 hours ago
Wow, was there a reddit hiccup? This same comment got posted six times.
permalink parent

[-] **tandembike** 11 points 18 hours ago
No, it's just my computer at work... It told me there was an error and didn't post so I hit it another 5 times :S
permalink parent

[-] **orthag** 2 points 13 hours ago
He wants to be extra sure.
permalink parent

[-] **the_bass_saxophone** 7 points 20 hours ago*
he looks like a really neat kitteh...looks cuddly yet intelligent.

i.imgur.com/zbBLI6N.jpg

search reddit

this post was submitted on 19 Aug 2014
1,469 points (95% upvoted)
shortlink: <http://redd.it/2e04un>

username password
 remember me reset password login

Submit a new link

Submit a new text post

cats

subscribe 208,168 readers
167 users here now

Everything about cats.

Rules & Guidelines

- No NSFW content.
- No animal abuse/cruelty.
- Don't lie and claim other people's cats as your own.
- Original content is preferred, such as your own pets and not using memes.
- No titles asking for upvotes (e.g. "This cat didn't get any love in /r/aww", "it's my cake day", "my first post here", "any love for ...").
- Links asking for funding or competition votes will be removed (see the list of subreddits below for a possible

Social computing refers to systems that support the gathering, processing and dissemination of content that is distributed across social collectives. Furthermore, the content in question is not independent of people, but rather is significant *precisely* because it linked to people, who are in turn associated with other people.

Class reading: Tech Review article
on “Social Machines”

An overview of the article

- Remember it was written in 2005!
- Many interesting ideas and prototype systems covered, which are realities we take for granted today:
 - Smartphones and other handheld devices
 - Personalization of web content
 - Collaborative filtering e.g., Amazon
 - Podcasts, sharing of multimedia in social environments
 - User generated content and self-publishing
 - Social networking sites and “six degrees of separation”
 - “social services” that collect and redistribute the knowledge of large communities of people
 - That social networks are not just “made up of people”, but people are connected to each other via shared objects, interests etc.
 - Mobile software sensitive to changing locations
 - Shared calendars, activity synchronization with friends and colleagues

How has social computing led to
“continuous computing”?

An obvious challenges of such
“continuous computing” – information
overload – two examples of SC systems
where you experience this

Article mentions SC systems “adapt more readily to our locations, our preferences, and our schedules” – is this always a good thing?

Weiser (PARC) proposed the idea of “ubiquitous computing”—how has SC systems been able to realize that?

The article also talks about extracting patterns of activities and predicting what to recommend based on future activity.

What opportunity do you see there?

What problem do you see there?

Next class

- Responses to assigned readings will be graded!
- Your response should focus on the following:
 - What is the main contribution?
 - Is it important? Why or why not?
 - What assumptions are being made?
 - What applications could arise?
 - How can it be extended?
 - What was unclear?
 - Did you find the paper interesting?
- Responses should be on Piazza by 11:59pm on Sunday