Welcome to NEMISIG at Brooklyn College

Michael I Mandel
mim@sci.brooklyn.cuny.edu

Brooklyn College, CUNY

NEMISIG
February 9, 2019
WIFI password: UwrqVh6On

Outline

1. Welcome to Brooklyn College

2. Welcome to NEMISIG

3. Speechlab at Brooklyn College

4. Labeling environmental recordings

Outline

Welcome to Brooklyn College

- Brooklyn College – 17,000 students, undergrad and masters
- CUNY – 19 colleges, 540,000 students
- CUNY Graduate Center – PhD students and profs from all campuses

Welcome to Brooklyn College

- Brooklyn College – 17,000 students, undergrad and masters
- CUNY – 19 colleges, 540,000 students
- CUNY Graduate Center – PhD students and profs from all campuses
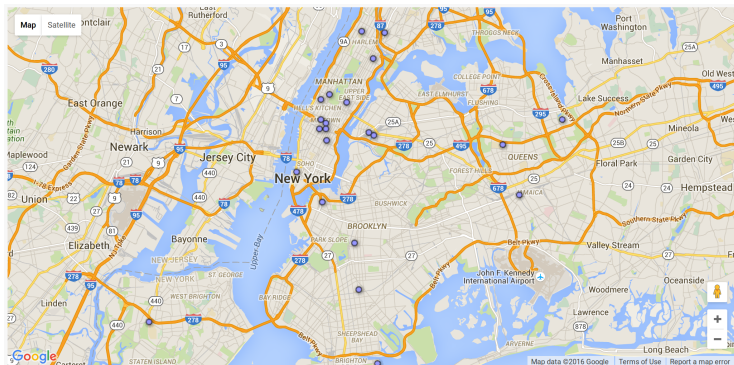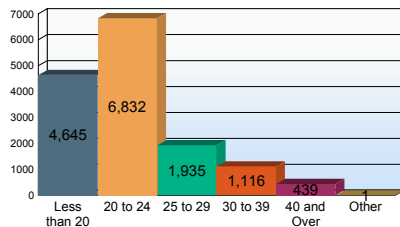
Brooklyn College students

Age

Undergraduate Students

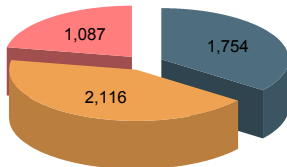|		
Less than 20	4,645	31%
20 to 24	6,832	46%
25 to 29	1,935	13%
30 to 39	1,116	7%
40 and Over	439	3%
Other	1	0%

- Born in over 150 countries (33% outside US mainland)
- Speak over 105 different languages (37% other than English at home)
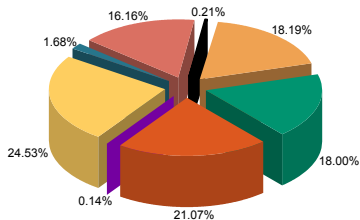- 31% are first generation in college

Brooklyn College students

Admissions

First-time Freshmen	1,754
New Transfers	2,116
New Graduate Students	1,087

Freshmen — Transfers — Graduate

Ethnicities

AIAN	Asian	Black
Hispanic	NHPI	White
Two or More	Missing/Unknown	

Brooklyn College students

Brooklyn College and social mobility

THE CHRONICLE of HIGHER EDUCATION

NEWS

≡ SECTIONS   DATA: **COLLEGES WITH THE HIGHEST STUDENT-MOBILITY RATES, 2014**

4-year public institutions

Filter

Rank	Institution	Median parent household income	Median child earnings, 2014	Mobility rate
1.	City U. of New York Bernard M. Baruch College	$42,800	$57,600	12.94%
2.	City College of City U. of New York	$35,500	$48,500	11.72%
3.	California State U. at Los Angeles	$36,600	$43,000	9.92%
4.	City U. of New York John Jay College of Criminal Justice	$41,800	$45,200	9.69%
5.	Stony Brook U.	$73,600	$60,100	8.41%
6.	City U. of New York, New York City College of Technology	$33,500	$37,000	8.33%
7.	City U. of New York Brooklyn College	$52,200	$44,300	8.07%

CUNY and social mobility

The New York Times

JANUARY 22, 2017

America's Great Working-Class Colleges

THE heyday of the colleges that serve America's working class can often feel very long ago. It harks back to the mid-20th century, when City College of New York cost only a few hundred dollars a year and was known as the "Harvard of the proletariat." Out West, California built an entire university system that was both accessible and excellent.

More recently, these universities have seemed to struggle, with unprepared students, squeezed budgets and high dropout rates. To some New Yorkers, "City College" is now mostly a byword for nostalgia.

It should not be.

Yes, the universities that educate students from modest backgrounds face big challenges, particularly state budget cuts. But many of them are performing much better than their new stereotype suggests. They remain deeply impressive institutions that continue to push many Americans into the middle class and beyond – many more, in fact, than elite colleges that receive far more attention.

Where does this optimistic conclusion come from? The most comprehensive study of college graduates yet conducted, based on millions of anonymous tax filings and financial-aid records. Published Wednesday, the study tracked students from nearly every college in the country (including those who failed to graduate), measuring their earnings years after they left campus. The paper is the latest in a burst of economic research made possible by the availability of huge data sets and powerful computers.

The City University of New York's City College campus at Broadway and 138th Street in New York.

"CUNY propels 'almost six times as many low-income students into the middle class and beyond as all eight Ivy League campuses, plus Duke, M.I.T., Stanford and Chicago, combined.'"

New Tow center for the performing arts
Not quite ready for us

Outline

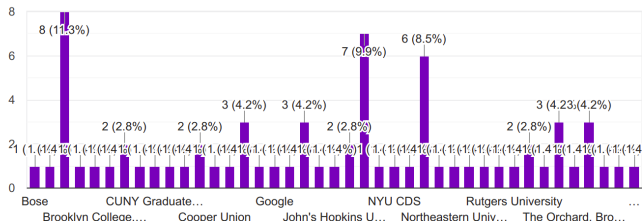# Past NEMISIGS

2018 Brown University, RI

2017 University of Rochester, NY

2016 Drexel University, PA

2015 Ithaca College, NY

2014 Columbia University, NY

2013 The EchoNest, MA

2012 Dartmouth College, NH

2011 Drexel University, PA

2010 New York University, NY

2009 . . . ?
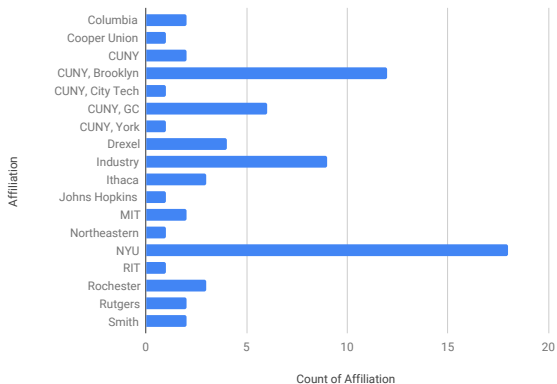
2008 Columbia University, NY

Attendee affiliations
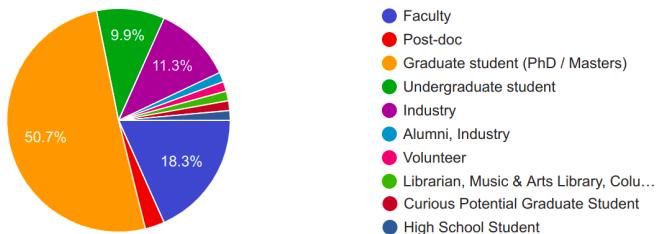

Affiliation

71 responses

Attendee affiliations (normalized)

Attendee titles

Occupation / title

71 responses

- Faculty
- Post-doc
- Graduate student (PhD / Masters)
- Undergraduate student
- Industry
- Alumni, Industry
- Volunteer
- Librarian, Music & Arts Library, Colu…
- Curious Potential Graduate Student
- High School Student

Attendee dietary preferences/allergies

Dietary preferences/allergies

71 responses

- Vegetarian
- Vegan
- Kosher
- Halal
- Gluten-free
- Nut-free
- None
- lactose-free
- Gluten & Egg Yolk/Mayonnaise/ Lecithin free
- All OK.
- crustaceans
- no pork
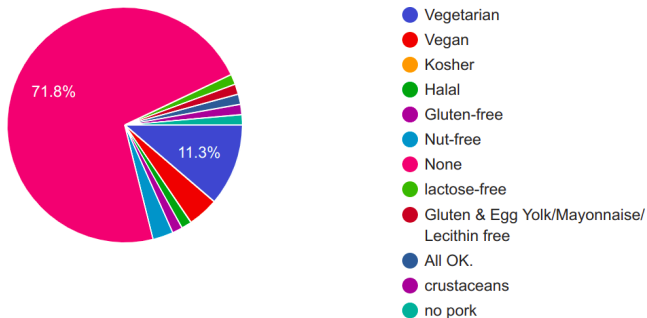
Schedule

11:00 Lab overview talks (Woody Tanger auditorium)

12:45 Lunch (Room 411)

13:45 Posters (Room 411)

15:00 Coffee + Unconference planning (Room 411)

15:30 Unconference session 1 (Rooms 241, 242, 411)

16:15 Unconference session 2 (Rooms 241, 242, 411)

17:00 Unconference recap and closing remarks (Woody Tanger Auditorium)

17:30 Drinks at Dallas BBQ?

Rooms we'll use in the Library

Tanger Auditorium
Floor 1
Talks
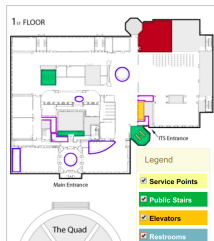
Gottlieb room (411)
Floor 4
Food and posters

Rooms 241 & 242
Floor 2
Unconference
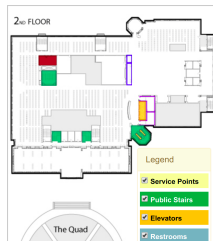
Food

Breakfast & snack: Lord's Bakery

Lunch: Hunger Pang

Outline

Speechlab at Brooklyn College: Profs

Michael Mandel
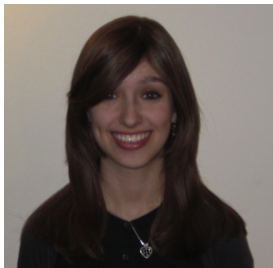
Rivka Levitan

Speechlab at Brooklyn College: PhD students
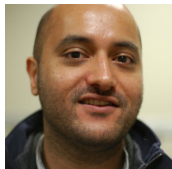
Ali Raza Syed
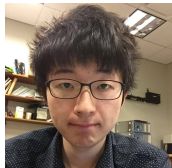
Andreas Weise
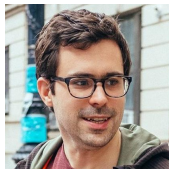
Felix Grezes

Zhaoheng Ni
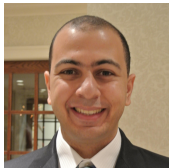
Hussein Ghaly

Rachel Rakov

Denys Katerenchuk

Soumi Maiti

Trinh Viet Anh

Hassan Salami

Speechlab at Brooklyn College: Alumni

Min Ma
PhD

Alex Loyko
BS

Dzmitry Kasinets
BS
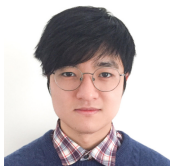
Eugene Chen
BS

Xiaowen Huang
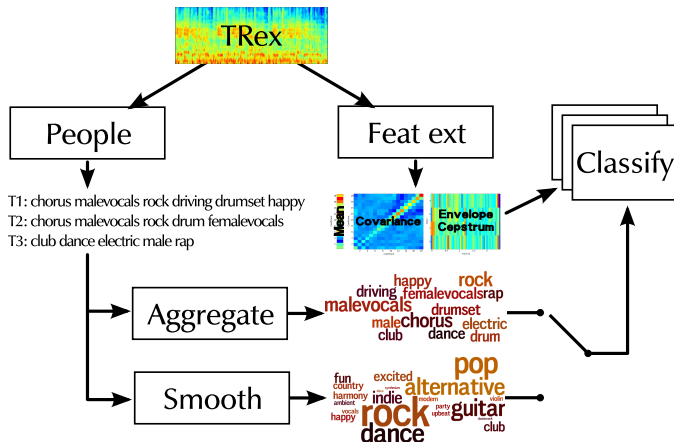BS

Guozhen An
PhD

Jiyoung Choi

Danny Chait

Some current projects

- Applying crowdsourcing and autotagging to environmental recordings
- Source separation by synthesis
- Understanding human and machine perception using bubble noise and the bubble cooperative network
- Creating conversational agents that entrain to their users
- Deep learning-based beamforming
- Using prosody to improve parsing and other natural language tasks

Some current projects

- Applying crowdsourcing and autotagging to environmental recordings
- Source separation by synthesis
- Understanding human and machine perception using bubble noise and the bubble cooperative network
- Creating conversational agents that entrain to their users
- Deep learning-based beamforming
- Using prosody to improve parsing and other natural language tasks

Outline

Automatically describing music like a human[1,2]

---

[1] Michael I. Mandel, Douglas Eck, and Yoshua Bengio. Learning tags that vary within a song. In *Proceedings of the International Society for Music Information Retrieval conference*, pages 399–404, August 2010

[2] Michael I. Mandel, Razvan Pascanu, Douglas Eck, Yoshua Bengio, Luca M. Aiello, Rossano Schifanella, and Filippo Menczer. Contextual tag inference. *ACM Transactions on Multimedia Computing, Communications and Applications*, 7S(1): 32:1–32:18, October 2011

MajorMiner collects descriptions from people in a game[3]

[3]Michael I. Mandel and Daniel P. W. Ellis. A web-based game for collecting music metadata. *Journal of New Music Research*, 37(2):151–165, 2008

Human descriptions can be learned by machines
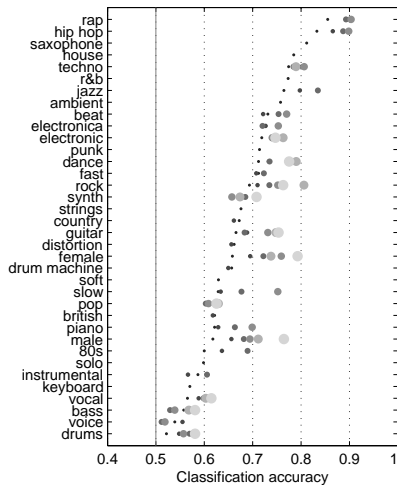
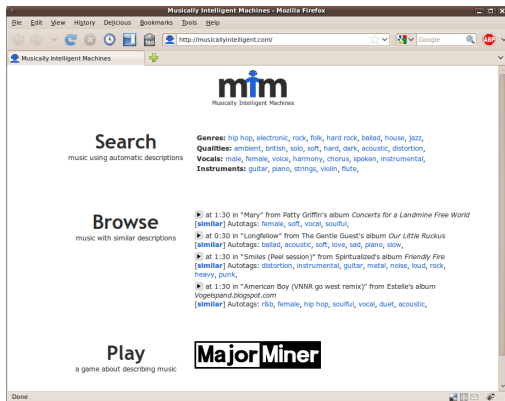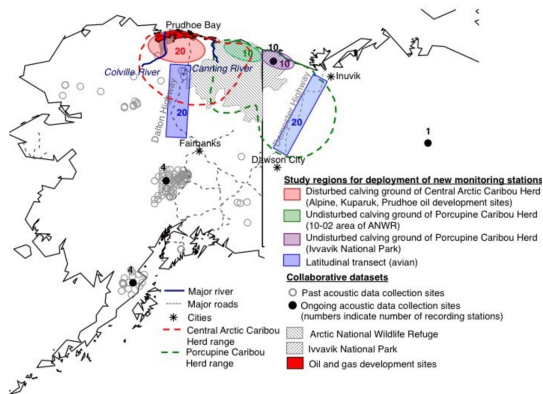# Automatic descriptions within a song

Outkast – Liberation
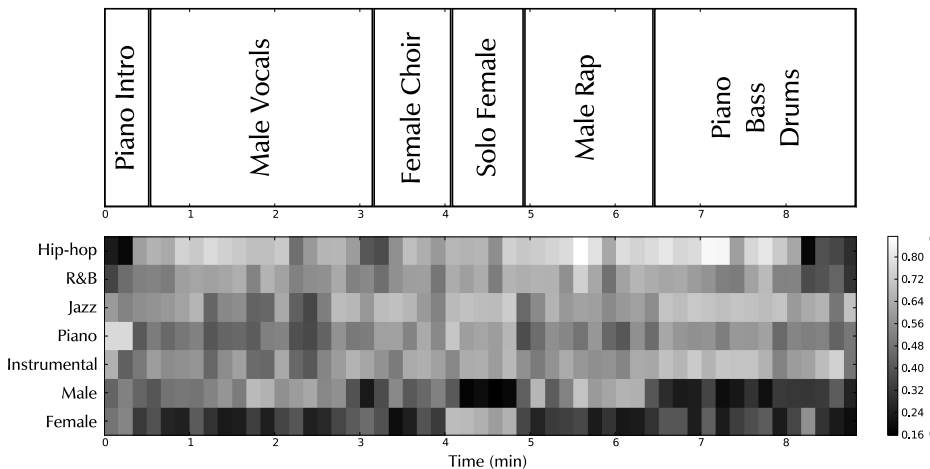
Can index music collections for search and browsing

- Crawled music blogs, downloaded 15,000 tracks
- Tagged them with 75-100 tags trained from MajorMiner

Now with recordings from the Alaskan wilderness

- Have continuous recordings from 20 sites over 1 summer ($\sim$1TB)
- Will collect 50%-on recordings from 80 sites over 5 summers
  (50 years of audio $\approx$ 400TB)

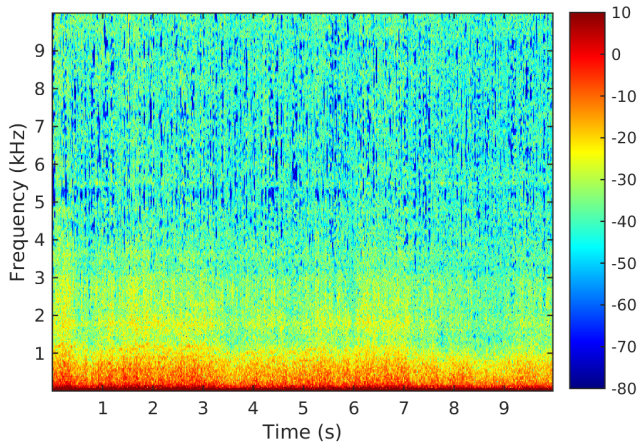# Now with recordings from the Alaskan wilderness

Top "birds" clip

Top "water" clip
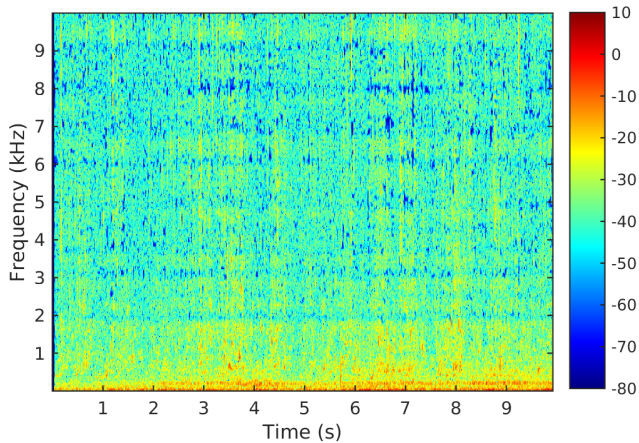
Top "wind" clip

Summary

- Ecologists want to know where animals are and when, sources of human-generated noise, and their effects
- Crowdsourcing and autotagging make this feasible
- How can we best gather data from different groups of people?
- Which parts of our recordings should we show them?
- Try it out: `http://alaska.majorminer.org`

Summary

- Ecologists want to know where animals are and when, sources of human-generated noise, and their effects
- Crowdsourcing and autotagging make this feasible
- How can we best gather data from different groups of people?
- Which parts of our recordings should we show them?
- Try it out: `http://alaska.majorminer.org`

Thanks!

Summary

- Ecologists want to know where animals are and when, sources of human-generated noise, and their effects
- Crowdsourcing and autotagging make this feasible
- How can we best gather data from different groups of people?
- Which parts of our recordings should we show them?
- Try it out: `http://alaska.majorminer.org`

Thanks!

Any questions?

Acknowledgements

Acknowledgements

Have fun!