

Welcome to NEMISIG at Brooklyn College

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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

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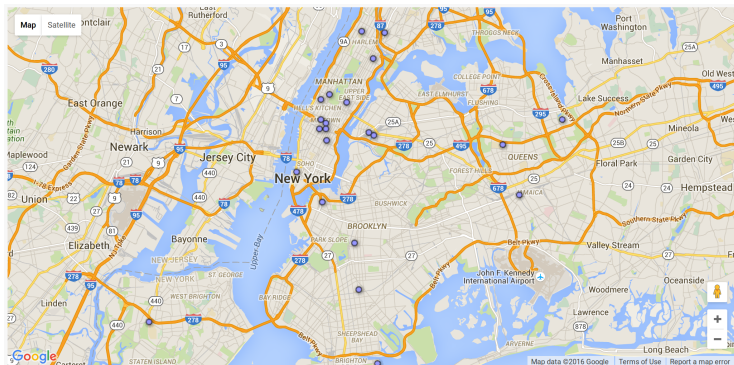
Welcome to Brooklyn College

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



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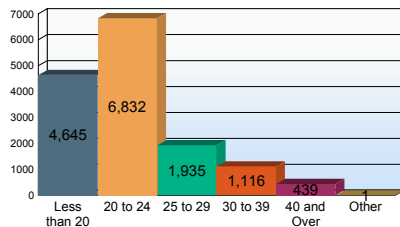


Brooklyn College students

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%

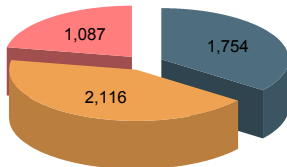


- Born in over 150 countries (33% outside US mainland)
- Speak over 105 different languages (37% other than English at home)
- 31% are first generation in college

Brooklyn College students

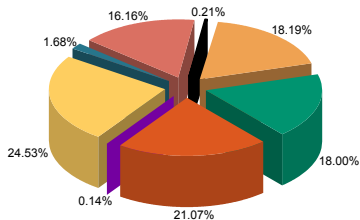
Admissions

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

USNews Education » Colleges Grad Schools Online Colleges Global Universities

HIGHER EDUCATION / COLLEGES / CAMPUS ETHNIC DIVERSITY

Campus Ethnic Diversity Regional Universities

See the Campus Ethnic Diversity Methodology

[National Universities](#) [Liberal Arts Colleges](#) [Regional Universities](#) [Regional Colleges](#)

School	City, State	Diversity Index
CUNY–Brooklyn College	Brooklyn, NY	0.76
CUNY–Baruch College	New York, NY	0.73
CUNY–Queens College	Queens, NY	0.73
Nyack College	Nyack, NY	0.73
SUNY College–Old Westbury	Old Westbury, NY	0.73
CUNY–City College	New York, NY	0.72
CUNY–Hunter College	New York, NY	0.72

USNews Education » Colleges Grad Schools Online Colleges Global Universities

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School	City, State	Diversity Index
Rutgers University–Newark	Newark, NJ	0.76
University of Nevada–Las Vegas	Las Vegas, NV	0.76
Andrews University	Berrien Springs, MI	0.75
Stanford University	Stanford, CA	0.74
University of Houston	Houston, TX	0.74
University of San Francisco	San Francisco, CA	0.74
San Francisco State University	San Francisco, CA	0.73

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-19th century, when City College of New York cost only a few hundred dollars a year and was known as the "Harvard of the proletariat." Over time, 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 own 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), assessing 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



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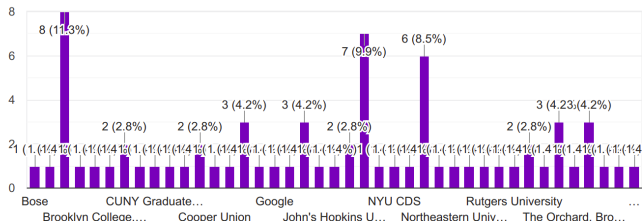
Past NEMISIGS

- 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

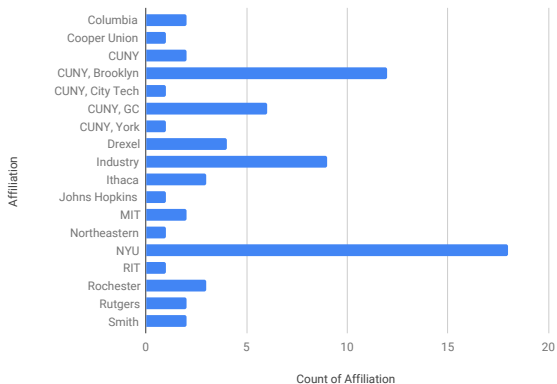
Affiliation

71 responses



Attendee affiliations (normalized)

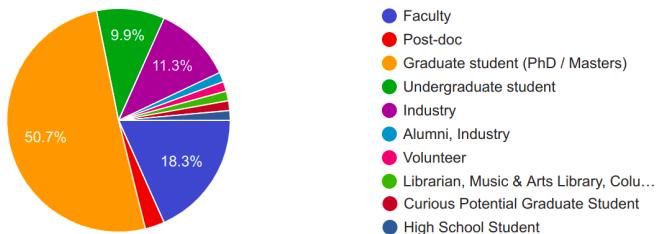
Count of Affiliation



Attendee titles

Occupation / title

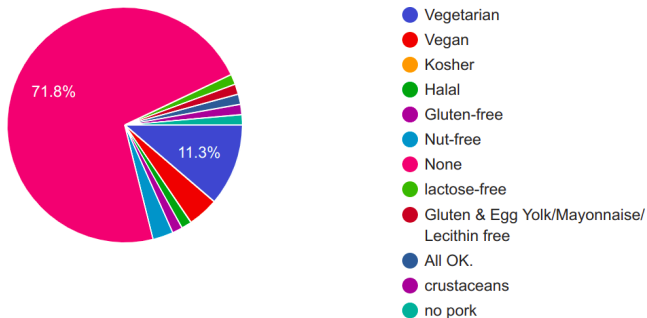
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Attendee dietary preferences/allergies

Dietary preferences/allergies

71 responses

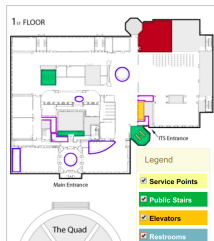


Schedule

- 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

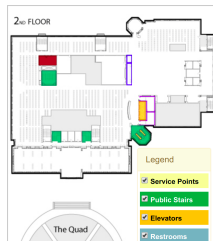
Tanger Auditorium Floor 1 Talks



Gottlieb room (411) Floor 4 Food and posters



Rooms 241 & 242 Floor 2 Unconference



Food

Breakfast & snack: Lord's Bakery



Lunch: Hunger Pang



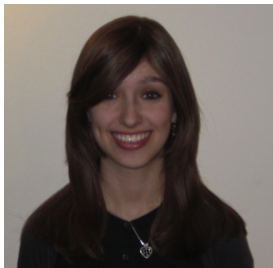
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Speechlab at Brooklyn College: Profs

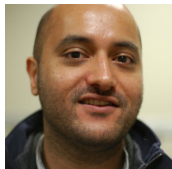


Michael Mandel



Rivka Levitan

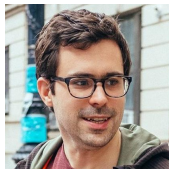
Speechlab at Brooklyn College: PhD students



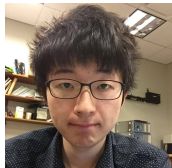
Ali Raza Syed



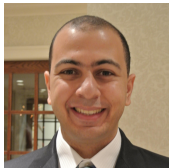
Andreas Weise



Felix Grezes



Zhaoheng Ni



Hussein Ghaly



Rachel Rakov

Denys Katerenchuk
Hassan Salami

Soumi Maiti

Trinh Viet Anh

Speechlab at Brooklyn College: Alumni



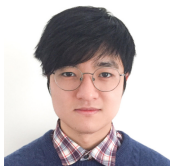
Min Ma
PhD



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

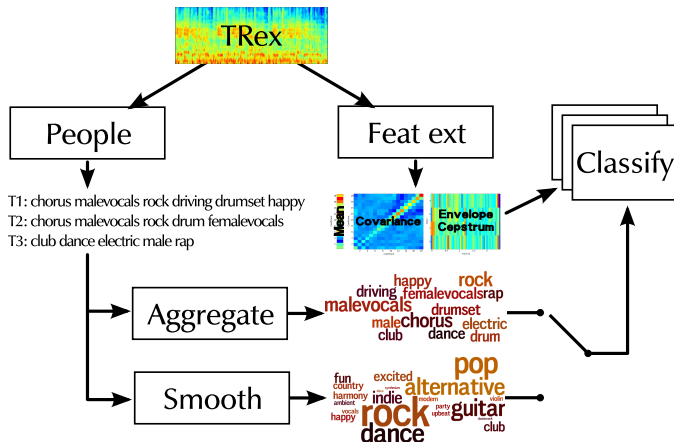
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Automatically describing music like a human^{1,2}



¹Michael 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

²Michael 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 game³

File Edit View History Delicious Bookmarks Tools Help

http://majorminer.org/main/clip

Major Miner

mim's score: 1335

New clip
Summary
Change password
Admin
Logout
Leaders
Search

Describe this clip

Your tags: slow, harp, female, sad, love, fiddle, violin

New clip Game summary

Tag colors: 2 points, 1 point, no points yet (but could be 2), 0 points.

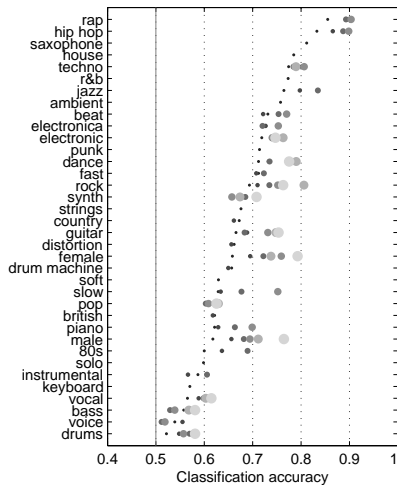
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Done

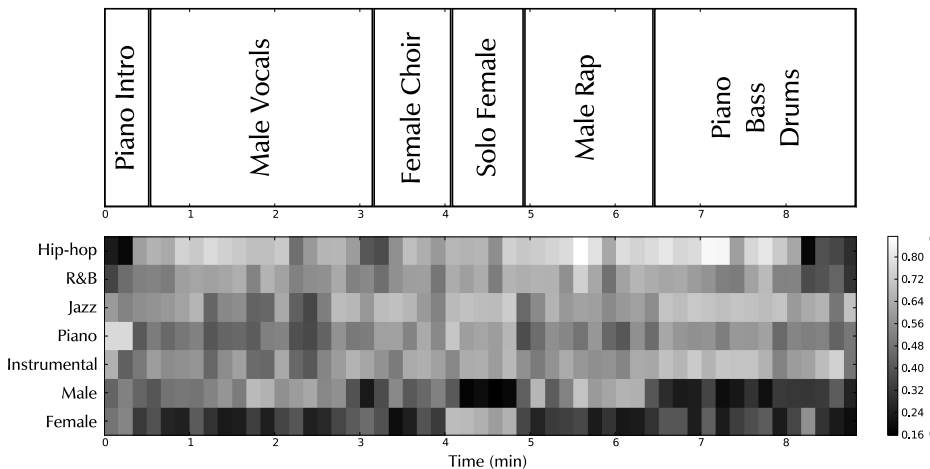
³Michael I. Mandel and Daniel P. W. Ellis. A web-based game for collecting music metadata. *Journal of New Music Research*, 37(2):151–165, 2008

Human descriptions can be learned by machines



Automatic descriptions within a song

Outkast – Liberation

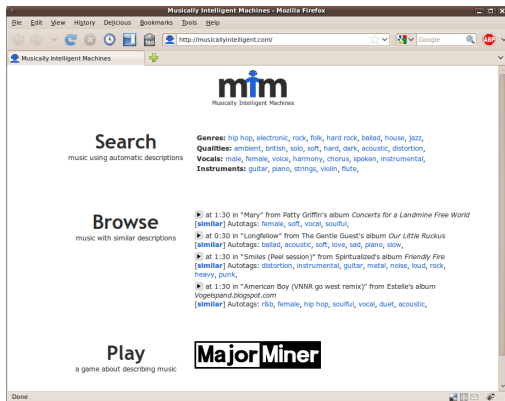


1:50

4:10

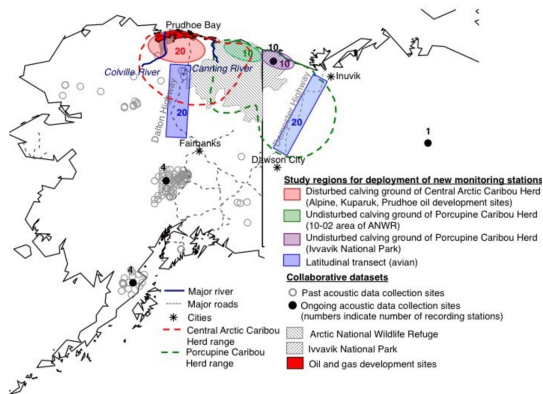
7:20

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 (~ 1 TB)
- Will collect 50%-on recordings from 80 sites over 5 summers (50 years of audio ≈ 400 TB)

Now with recordings from the Alaskan wilderness

Major Miner's tagging gallery

alaska.majorminer.org

Major Miner

Summary

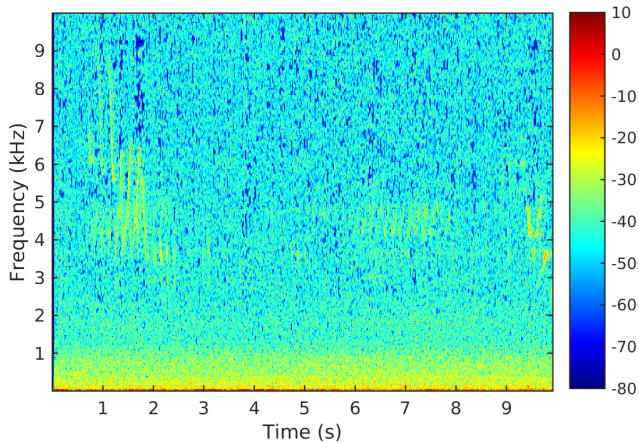
mim's score: 55

- New clip
- Summary
- Change password
- Admin
- Logout
- Leaders
- Search

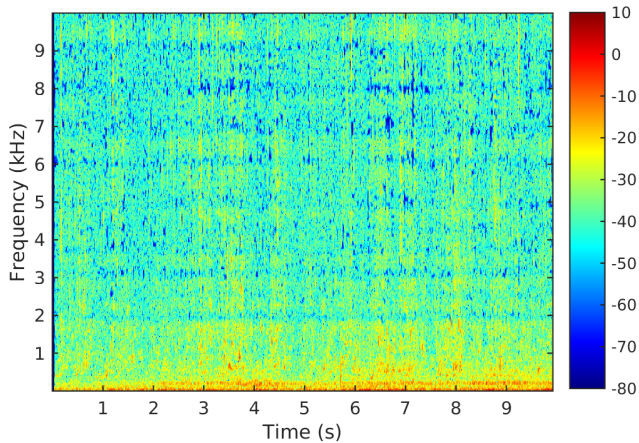
Your last 10 clips

▶ 0:00 ● at 0:30 in "/ROCKY_20160612_130124_00m_00s__00m_10s.mp3 " from 's album
Your tags: quiet, <i>birds</i> Someone else's tags: bird
▶ 0:00 ● at 0:50 in "/OCNPT3_20160608_151838_00m_00s__00m_10s.mp3 " from 's album
Your tags: <i>wind</i> , bird, tweet, birdsong, clipping, distortion, songbird Someone else's tags: wind
▶ 0:00 ● at 0:10 in "/OCNPT3_20160608_151158_00m_00s__00m_10s.mp3 " from 's album
Your tags: clipping, distortion, wind, chirping, birds, close, bird, very close Someone else's tags:
▶ 0:00 ● at 0:10 in "/OCNPT_20160701_045138_00m_00s__00m_10s.mp3 " from 's album
Your tags: wood, clacking, ptarmigan, woodle, trill, willow ptarmigan Someone else's tags: bird, loon
▶ 0:00 ● at 0:50 in "/OCNPT3_20160608_174038_00m_00s__00m_10s.mp3 " from 's album
Your tags: loud, wind, distortion, gale, clacking, rattling Someone else's tags:
▶ 0:00 ● at 1:30 in "/OCNPT3_20160608_155318_00m_00s__00m_10s.mp3 " from 's album
Your tags: loud, distortion, gale, wind

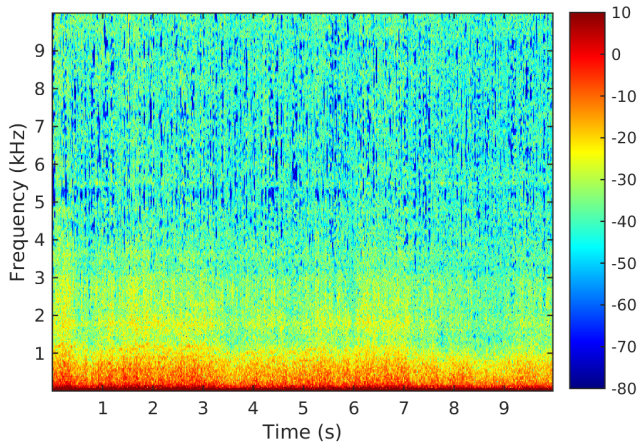
Top "birds" clip



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>

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Thanks!

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Thanks!

Any questions?

Acknowledgements

NEMISIG 2019 is supported by

- Brooklyn College Department of Computer and Information Science
- Brooklyn College School of Natural and Behavioral Sciences

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Have fun!