



COMPUTER SCIENCE^(/)



COLUMBIA | ENGINEERING (<http://engineering.columbia.edu/>)
The Fu Foundation School of Engineering and Applied Science

Machine Learning



**New Machine Learning Tool
Predicts Devastating Intestinal
Disease in Premature Infants**

(<https://www.cs.columbia.edu/2020/new-machine-learning-tool-predicts-devastating-intestinal-disease-in-premature-infants/?redirect=44caf631076ab78da44baa3e3b3195fc>)



**DI-BOSS, an operating system for
smart buildings**

IoT sensors monitor everything from energy consumption and water usage to air temperature and elevator status to conserve energy, reduce waste, and save money.

(<https://www.cs.columbia.edu/2016/di-boss/?redirect=d3154f9caec8ed8418ad96228df8f7dd>)

(<https://www.cs.columbia.edu/2018/cs-welcomes-new-faculty/>)



CS Welcomes New Faculty

The department welcomes
Baishakhi Ray, Ronghui Gu, Carl
Vondrick, and Tony Dear.

About

The group does research on foundational aspects of machine learning — including causal inference, probabilistic modeling, and sequential decision making — as well as on applications in computational biology, computer vision, natural language and spoken language processing, and robotics.

It is part of a broader machine learning community at Columbia that spans multiple departments, schools, and institutes. Activities include seminars on statistical machine learning, several student-led reading groups and social hours, and participation in local events such as the New York Academy of Sciences Machine Learning Symposium.

Faculty and Affiliates



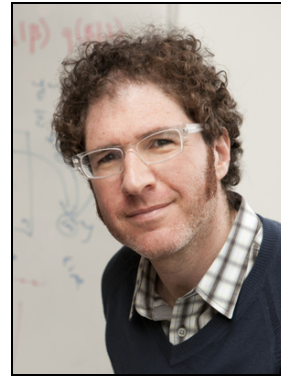
(<http://www.mit.edu/~andoni/>)

Alexandr Andoni
(<http://www.mit.edu/~andoni/>)



(<https://causalai.net/>)

Elias Bareinboim
(<https://causalai.net/>)



(<http://www.cs.columbia.edu/~blei/>)

David Blei
(<http://www.cs.columbia.edu/~blei/>)



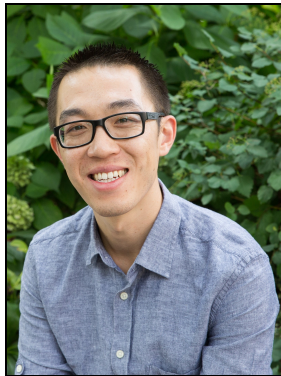
(<http://www.cs.columbia.edu/~cannon/>)

Adam Cannon
(<http://www.cs.columbia.edu/~cannon/>)



(<http://www.ee.columbia.edu/~sfchang/>)

Shih-Fu Chang
(<http://www.ee.columbia.edu/~sfchang/>)



(<http://www.cs.columbia.edu/~tdear/>)

Tony Dear
(<http://www.cs.columbia.edu/~tdear/>)



(<http://www.cs.columbia.edu/~dhsu/>)

Daniel Hsu
(<http://www.cs.columbia.edu/~dhsu/>)



(<https://daklab.github.io/>)

David Knowles
(<https://daklab.github.io/>)



(<https://www.cs.columbia.edu/~toni/>)
Toniann Pitassi
(<https://www.cs.columbia.edu/~toni/>)



(<http://www.cs.columbia.edu/~ansaf/>)
Ansaf Salleb-Aouissi
(<http://www.cs.columbia.edu/~ansaf/>)



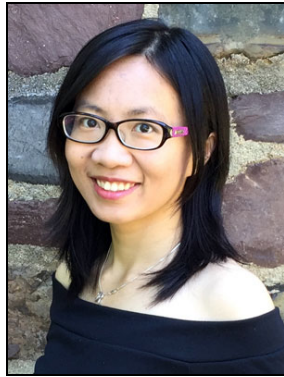
(<http://www.cs.columbia.edu/~verma/>)
Nakul Verma
(<http://www.cs.columbia.edu/~verma/>)



(<http://www.cs.columbia.edu/~vondrick/>)
Carl Vondrick
(<http://www.cs.columbia.edu/~vondrick/>)



(<https://www.cs.columbia.edu/~zemel/>)
Richard Zemel
(<https://www.cs.columbia.edu/~zemel/>)



(<https://www.cs.columbia.edu/~shurans/index.html>)

Shuran Song

(<https://www.cs.columbia.edu/~shurans/index.html>)



(<http://aqlab.io>)

**Mohammed
AlQuraishi**
(<http://aqlab.io>)



(<https://azizilab.com>)

Elham Azizi
(<https://azizilab.com>)



(<http://people.dbmi.columbia.edu/~noemie>)

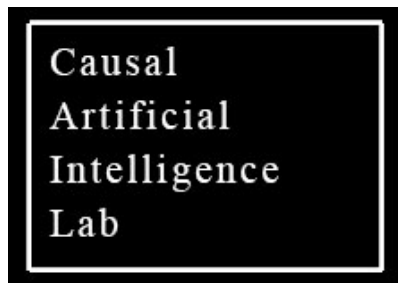
Noemie Elhadad
(<http://people.dbmi.columbia.edu/~noemie>)



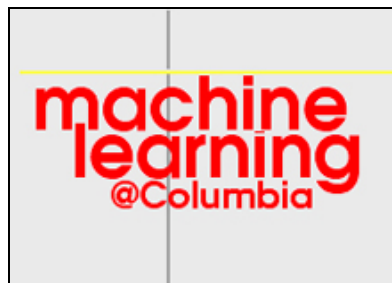
(<https://shalmalijoshi.github.io/reAIM/>)

Shalmali Joshi
(<https://shalmalijoshi.github.io/reAIM/>)

Research Labs



Causal Artificial
Intelligence Lab
(<https://causalai.net/>)



Machine Learning @
Columbia
(<https://ml.cs.columbia.edu>)

Find the COVID-19 Resource Guide here (<https://news.columbia.edu/news/update-covid-19-university-guidance>).

Computer Science at Columbia University

The computer science department advances the role of computing in our lives through research and prepares the next generation of computer scientists with its academic programs.

Find out more about the department here ([/about](#)).

Upcoming Events

SEP
26

CSB 480

Theory Student Seminar

Tuesday 12:30 pm

SEP
29

Semirandom CSP refutation via Kikuchi matrices: Algorithms, Certificates, and Connections

Theory Lunch

Friday 12:30 pm

CS conference room (CSB453)

Peter Manohar, Carnegie Mellon University

OCT
03

CSB 480

Theory Student Seminar

Tuesday 12:40 pm

OCT
06

Friday 12:30 pm

CS conference room (CSB453)

Sunoo Park, New York University

Theory Lunch - Sunoo Park

Theory Lunch

[View All >> \(https://www.cs.columbia.edu/calendar/\)](https://www.cs.columbia.edu/calendar/)

In the News

MIT Technology Review

(<https://www.cs.columbia.edu/2023/the-computer-scientist-who-hunts-for-costly-bugs-in-crypto-code/?redirect=0c99d322ac4a621f0cb1bf31ffea64ba>)

The Computer Scientist Who Hunts for Costly Bugs in Crypto Code (<https://www.cs.columbia.edu/2023/the-computer-scientist-who-hunts-for-costly-bugs-in-crypto-code/?redirect=0c99d322ac4a621f0cb1bf31ffea64ba>)

(Ronghui Gu)



(<https://www.cs.columbia.edu/2022/this-self-aware-robot-taught-itself-how-to-control-its-own-body/?redirect=2275dd724f7cd014090b808bf9f6c3c9>)

This Self-Aware Robot Taught Itself How to Control Its Own Body (<https://www.cs.columbia.edu/2022/this-self-aware-robot-taught-itself-how-to-control-its-own-body/?redirect=2275dd724f7cd014090b808bf9f6c3c9>)

(Carl Vondrick)



Columbia Awarded \$185 Million in Patent-Infringement Lawsuit (<https://www.cs.columbia.edu/2022/columbia-awarded-185-million-in-patent-infringement-lawsuit/?redirect=00ff51e39830d7b7a1521ed64b5174b7>)

(Salvatore Stolfo)

(<https://www.cs.columbia.edu/2022/columbia-awarded-185-million-in-patent-infringement-lawsuit/?redirect=00ff51e39830d7b7a1521ed64b5174b7>)



Mathematicians Transcend Geometric Theory of Motion (<https://www.cs.columbia.edu/2021/mathematicians-transcend-geometric-theory-of-motion/?redirect=5673fa940ca6c0bede69f18e4810731e>)

(Andrew Blumberg)

(<https://www.cs.columbia.edu/2021/mathematicians-transcend-geometric-theory-of-motion/?redirect=5673fa940ca6c0bede69f18e4810731e>)



Auto-scans of phones would violate data privacy, say security experts (<https://www.cs.columbia.edu/2021/auto-scans-of-phones-would-violate-data-privacy-say-security-experts/?redirect=2ed01b3c9d786fd4c2557ead92be01b1>)

(Steven Bellovin)

(<https://www.cs.columbia.edu/2021/auto-scans-of-phones-would-violate-data-privacy-say-security-experts/?redirect=2ed01b3c9d786fd4c2557ead92be01b1>)

Press Mentions

The logo for TIME magazine, featuring the word "TIME" in a large, red, serif font.

How The Morning Show Rewrites the Notorious 2014 Sony Hack (<https://www.cs.columbia.edu/2023/how-the-morning-show-rewrites-the-notorious-2014-sony-hack/?redirect=01cb778274fb38a72826afd84056ab79>)
(Suman Jana)

(<https://www.cs.columbia.edu/2023/how-the-morning-show-rewrites-the-notorious-2014-sony-hack/?redirect=01cb778274fb38a72826afd84056ab79>)

The logo for The Washington Post, featuring the words "The Washington Post" in a black, serif font.

Your Résumé Isn't the Only Thing Popular Job Sites Evaluate (<https://www.cs.columbia.edu/2023/your-resume-isnt-the-only-thing-popular-job-sites-evaluate/?redirect=f25fb139a595563c5d6b2ebf335c354a>)

(<https://www.cs.columbia.edu/2023/your-resume-isnt-the-only-thing-popular-job-sites-evaluate/?redirect=f25fb139a595563c5d6b2ebf335c354a>)

The logo for SCIENTIFIC AMERICAN, featuring the words "SCIENTIFIC AMERICAN" in a large, black, serif font.

Yes, AI Models Can Get Worse over Time (<https://www.cs.columbia.edu/2023/yes-ai-models-can-get-worse-over-time/?redirect=bd00821a18c6554527db1cab787c273b>)
(Kathleen McKeown, Vishal Misra)

(<https://www.cs.columbia.edu/2023/yes-ai-models-can-get-worse-over-time/?redirect=bd00821a18c6554527db1cab787c273b>)



Here's how AI is being used to unlock secrets still hidden in the human brain (<https://www.cs.columbia.edu/2023/heres-how-ai-is-being-used-to-unlock-secrets-still-hidden-in-the-human-brain/?...>)

(Richard Zemel)

(<https://www.cs.columbia.edu/2023/heres-how-ai-is-being-used-to-unlock-secrets-still-hidden-in-the-human-brain/?redirect=4055e95b510974e140a3552097549bb7>)



Does AI in NYC need restrictions? Officials hold closed-door meeting to discuss (<https://www.cs.columbia.edu/2023/does-ai-in-nyc-need-restrictions-officials-hold-closed-door-meeting-to-discuss...>)

([https://www.cs.columbia.edu/2023/does-ai-in-nyc-need-restrictions-officials-hold-closed-door-meeting-to-discuss/?CS@CU MS Bridge Program in Computer Science](https://www.cs.columbia.edu/2023/does-ai-in-nyc-need-restrictions-officials-hold-closed-door-meeting-to-discuss/?CS@CU%20MS%20Bridge%20Program%20in%20Computer%20Science) (<https://www.cs.columbia.edu/ms-bridge/>)
 redirect=557ac481d534504ff10bb8a2246504e8)

(<https://www.columbia.edu>)

Links

Map (https://www.cs.columbia.edu/wp-content/uploads/2022/07/morningsidemap_2015aug-7.pdf)

School of Engineering And Applied Science (<http://engineering.columbia.edu/>)

Data Science Institute (<http://datascience.columbia.edu/>)

CRF (<http://www.cs.columbia.edu/crf>)

MICE (<https://mice.cs.columbia.edu>)

ASCENT Program (<https://www.cs.columbia.edu/ascent/>)

Copyright FAQ (<https://www.cs.columbia.edu/resources/copyright/>)

CS Advising (<https://www.cs.columbia.edu/academic-advising/>)

Contact

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Directions (<https://www.cs.columbia.edu/resources/directions/>)

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