COMPUTER SCIENCE (/)

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

UNDERGRADUATE PROGRAMS

Computer Science majors at Columbia study an integrated curriculum, partially in areas with an immediate relationship to the computer, such as programming languages, operating systems, and computer architecture, and partially in theoretical computer science and mathematics.

A broad range of upper-level courses is available in topics including artificial intelligence, natural language processing, computational complexity and the analysis of algorithms, computer communications, combinatorial methods, computer architecture, computer graphics, databases, mathematical models for computation, optimization, and programming environments. Through this integrated approach, students acquire the flexibility needed in a rapidly changing field; they are prepared to engage in both applied and theoretical developments in computer science as they happen.

Most graduates of the Computer Science Program at Columbia step directly into career positions in computer science with industry or government or continue their education in graduate degree programs. Many choose to combine computer science with a second

career interest by pursuing additional programs in business administration, medicine, or other professional studies.

DEGREE PROGRAM QUICK GUIDES

BS in Computer Science (SEAS)

BS in Computer Engineering (SEAS)

BA in Computer Science (CC, GS, Barnard)

BA in Computer Science and Mathematics (CC & GS)

BA in Data Science (CC & GS)

BA in Information Science (CC & GS)

Minor/ Concentration in Computer Science

A Guide for CC & GS Transfer Students

ADVISORS

CS Advising– *Administrative* (mailto:ug-advising@cs.columbia.edu)

CS Faculty Advisors– *Academic*
(https://www.cs.columbia.edu/education/undergraduate/advisors/)

DEGREE PROGRESS CHECKLISTS & CLEARANCE FORMS

BS in Computer Science (SEAS) Checklist

BA in Computer Science (CC, GS, Barnard) Checklist

BA in Computer Science and Mathematics (CC & GS) Checklist

BA in Data Science (CC & GS) Checklist

FREQUENTLY ASKED QUESTIONS (FAQ)

Prospective Students
(http://www.cs.columbia.edu/resources/prospectivefaq/)

Currently Enrolled Students
(https://www.cs.columbia.edu/undergrad-faq/)

TOPICS COURSES

Undergraduate students must get permission from their faculty advisor to count any topics course toward the Major.

Students may take multiple sections of COMS 4995 and/or COMS 6998, as each section will vary by content each semester. If you aren't sure if a course is the same, please email the instructor to verify.

CURRENT RESEARCH OPPORTUNITIES

Internal Opportunities

(https://studentresearch.engineering.columbia.edu/content/current-research-opportunities)

External Opportunities

(https://studentresearch.engineering.columbia.edu/content/external-research-opportunities)

CONTACT US

If you have questions about the CS Department and major/minor requirements, please email CS Advising (https://www.cs.columbia.edu/academic-advising/).

If you have questions about the admissions requirements, please get in touch with the following admissions offices:

- School of Engineering/Columbia College (http://www.studentaffairs.columbia.edu/admissions/)
- School of General Studies (http://www.gs.columbia.edu/admissions)
- Barnard College (http://www.barnard.edu/admiss/)

ACADEMIC HONESTY

Computer Science Department's Academic Honesty Policy
(https://www.cs.columbia.edu/academic/academic-honesty/)

Updated 07/25/2023

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

Theory Student Seminar

Tuesday 12:30 pm

CSB 480

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

Theory Student Seminar

Tuesday 12:40 pm

CSB 480

OCT
06

Theory Lunch - Sunoo Park

Theory Lunch

Friday 12:30 pm

CS conference room (CSB453)

Sunoo Park, New York University

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

In the News

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/2023/the-computer-scientist-who-hunts-for-costly-bugs-in-crypto-code/?redirect=0c99d322ac4a621f0cb1bf31ffea64ba)

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)

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

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)

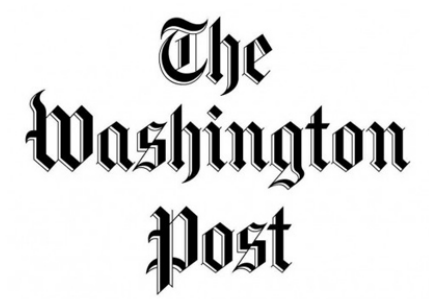
(https://www.cs.columbia.edu/2021/auto-
scans-of-phones-would-violate-
data-privacy-say-security-experts/?
redirect=2ed01b3c9d786fd4c2557ead92be01b1)

Press Mentions

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)

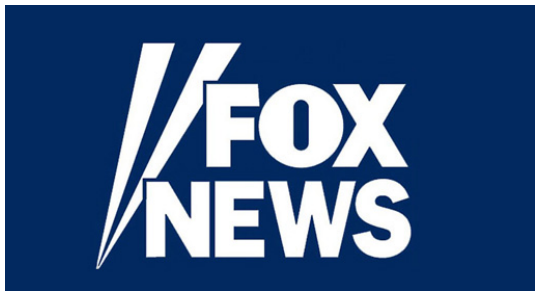


Your Résumé Isn't the Only Thing Popular Job Sites Evaluate (https://www.cs.columbia.edu/2023/your-resume-isnt-the-only-thing-popular-job-sites-evaluate/?redirect=f25fb139a595563c5d6b2ebf335c354a)

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

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)

(https://www.cs.columbia.edu/2023/does-ai-in-nyc-need-restrictions-officials-hold-closed-door-meeting-to-discuss/?redirect=557ac481d534504f10bb8a2246504e8)

Apply

Columbia Undergraduate Admissions (SEAS) (http://undergrad.admissions.columbia.edu/learn/academiclife/engineering)

M.S./Ph.D. Application (https://apply.engineering.columbia.edu/apply/)

MS Express Application for Current Undergrads (http://gradengineering.columbia.edu/ms-express-application-columbia-university-undergraduates)

CS@CU MS Bridge Program in Computer Science (https://www.cs.columbia.edu/ms-bridge/)

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…

(Jeannette Wing)

(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

Computer Science Department
500 West 120 Street, Room 450
MC0401
New York, New York 10027

Phone: +1-212-853-8400
Fax: +1-212-853-8440

Contact Us (/contact)

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