

The Best Place to Build the Future: Computer Science @ Carnegie Mellon University

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Carnegie Mellon University

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Bio

- HCI(HS): SMTP, Canoeing
- HCJC: PCME, Gate Physics, Infocomm and Robotics Society (Vice Chair)
- Did not do H3, although took NUS CS3233 (Competitive Programming) as a guest participant for NOI contestants
- Spent most of my time on programming side projects and competitions (National Olympiad in Informatics (NOI), hackathons, Capture-The-Flag cybersecurity competitions, etc...)
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- Got my act together for A levels, 90/90
- Moral: Anything is possible, don't give up!

CMU School of Computer Science Overview

- Small tight-knit cohort, ~ 200 people
- Rigorous and challenging undergraduate curriculum
- Great professors, introductory classes have an army of teaching assistants (TAs), strong academic support system
- Easy to do undergraduate research
- Common to have imposter syndrome
- Everyone gets good jobs after graduation or goes to a top graduate program

Many Areas To Explore Your Academic Interests

7 departments within the School of Computer Science (largest in the world)



Carnegie Mellon University

Computer Science Department



Human-
Computer
Interaction
Institute



institute for
SOFTWARE
RESEARCH

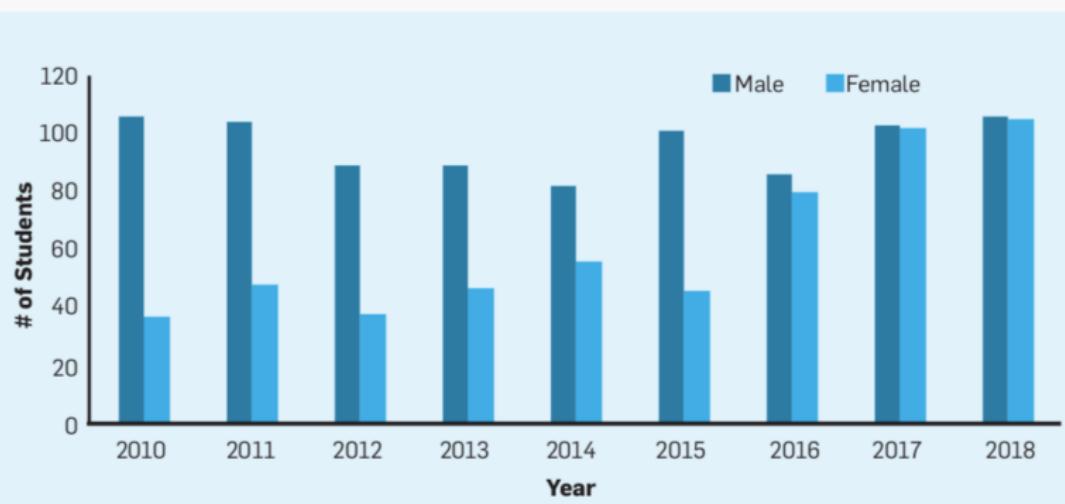


Language
Technologies
Institute



Creating a More Just and Equitable Future

Percentage of Male and Female First-Year Students by Year of Enrollment in Computer Science at Carnegie Mellon University



Without any compromises to admission standards, academic integrity, or changing the curriculum to suit women.

My Experience

Trip to Google Pittsburgh during freshmen orientation



My Experience

The Gates-Hillman Center, home of the School of Computer Science



My Experience

Spring Carnival, a CMU tradition



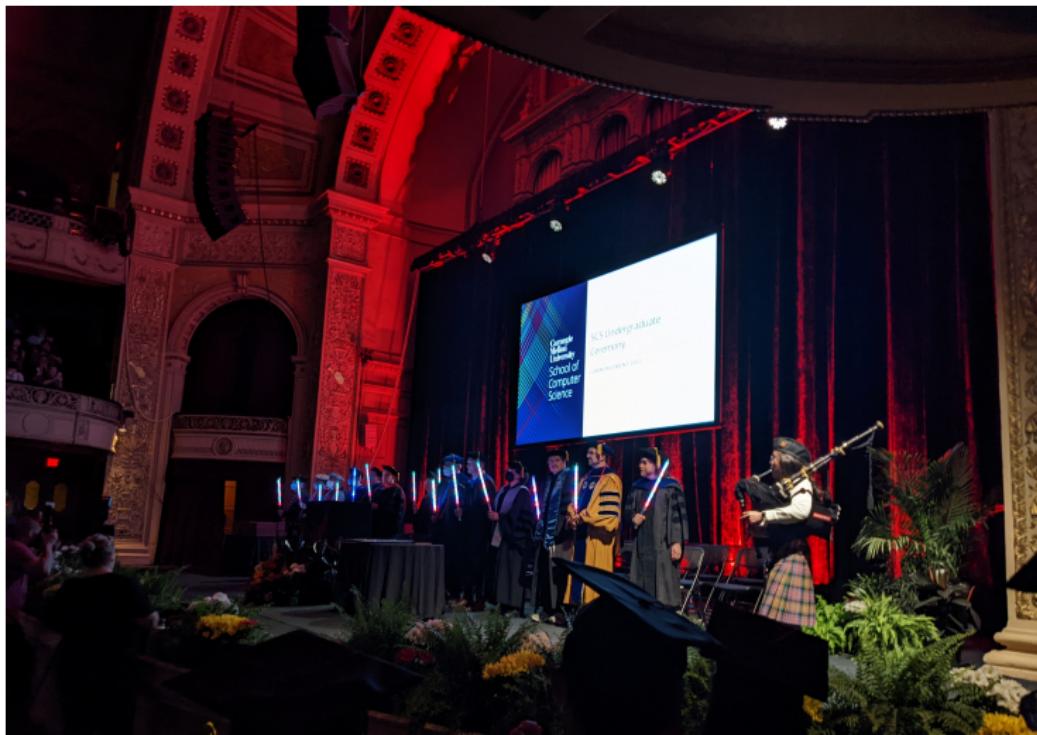
My Experience

DEFCON 29 Finals with the Plaid Parliament of Pwning (PPP)



My Experience

Faculty pulling out lightsabers during graduation ceremony



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- 4 years of hard work is an equalizer - people who come in knowing nothing about CS graduate knowing as much as, if not more than people who came in highly prepared

Internships

- Freshmen year: Asana, project management platform
- Sophomore year: Facebook (remote)
- Junior year: Jane Street, quantitative trading firm
- Currently interning at Jane Street again



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False: almost all Singaporeans I know who studied CS in the US go on to high paying tech jobs or graduate programs.
- I will only apply for the top n schools for CS on USNews.
See next slide...

Choosing the right CS program

- Key takeaway: use CSRankings instead of USNews for CS program rankings
- USNews score is heavily “reputation-based” from “expert opinion”, favors legacy and prestige over current research output
- <https://csrankings.org>
- Based on publications to the most selective conferences in the world, good indication of where all the top minds are

CSRankings.org

CSRankings: Computer Science Rankings

CSRankings is a metrics-based ranking of top computer science institutions around the world. Click on a triangle (▶) to expand areas or institutions. Click on a name to go to a faculty member's home page. Click on a chart icon (the bar chart icon after a name or institution) to see the distribution of their publication areas as a bar chart. Click on a Google Scholar icon (g+) to see publications, and click on the DBLP logo (db) to go to a DBLP entry. Applying to grad school? Read this first. Do you find CSrankings useful? Sponsor CSrankings on GitHub.

Rank institutions in USA ▾ by publications from 2012 ▾ to 2022 ▾

All Areas [off | on]

AI [off | on]

- ▶ Artificial intelligence
- ▶ Computer vision
- ▶ Machine learning & data mining
- ▶ Natural language processing
- ▶ The Web & information retrieval

Systems [off | on]

- ▶ Computer architecture
- ▶ Computer networks
- ▶ Computer security
- ▶ Databases
- ▶ Design automation
- ▶ Embedded & real-time systems
- ▶ High-performance computing
- ▶ Mobile computing
- ▶ Measurement & perf. analysis
- ▶ Operating systems
- ▶ Programming languages
- ▶ Software engineering

Theory [off | on]

- ▶ Algorithms & complexity

#	Institution	Count	Faculty
1	▶ Carnegie Mellon University  	19.7	160
2	▶ Univ. of Illinois at Urbana-Champaign  	13.8	109
3	▶ Massachusetts Institute of Technology  	12.6	93
4	▶ Univ. of California - San Diego  	11.5	110
5	▶ University of Michigan  	10.9	96
6	▶ Stanford University  	10.5	68
7	▶ Cornell University  	10.3	80
8	▶ Univ. of California - Berkeley  	10.0	91
9	▶ University of Washington  	9.8	75
10	▶ Georgia Institute of Technology  	8.8	94
11	▶ University of Maryland - College Park  	8.1	86
12	▶ University of Wisconsin - Madison  	7.4	62
13	▶ Columbia University  	7.3	55
13	▶ Northeastern University  	7.3	74
15	▶ Purdue University  	6.8	70
15	▶ University of Texas at Austin	6.8	46
17	▶ University of Pennsylvania	6.6	63
18	▶ Univ. of California - Los Angeles	5.6	42

Some possible questions...

- I might be interested to study CS but I am not sure, how should I decide?
- How do I prepare for CS in college?
- Is studying CS overseas worth the return on investment?
- Should I take a scholarship for overseas study?
- How do I get an internship in the US as an international student?
- Is it hard to make friends overseas?
- What are some of your favorite college classes?
- Are my career prospects in the US worse because I am a foreigner?
- How is working in tech in the US?
- Internship and full-time salary information?
- Will it be hard to work in the US if I choose to study locally?