

# 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



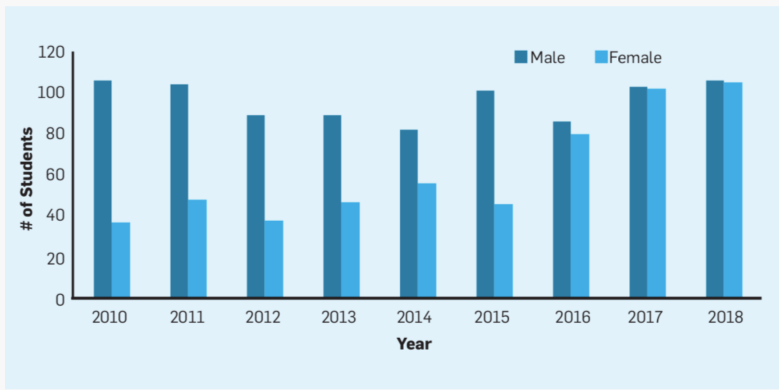
# Many Areas To Explore Your Academic Interests

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



# 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



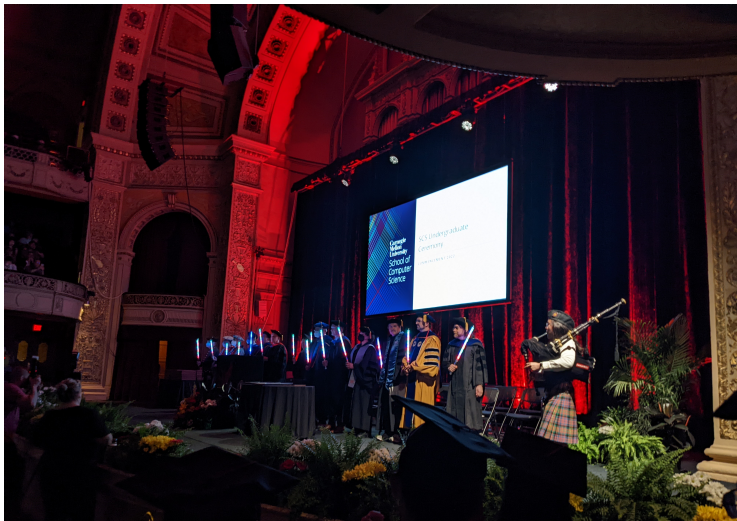
# My Experience

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



# My Experience

Faculty pulling out lightsabers during graduation ceremony



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- Understand societal issues much better once I experienced being a minority
- Inclusive and welcoming environment for under-represented groups (Women@SCS, SCS4All)
- 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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
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- 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  after a name or institution) to see the distribution of their publication areas as a . Click on a Google Scholar icon () to see publications, and click on the DBLP logo () 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  by publications from  to

### 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?