Start Making Your Impact in Computer Science.

If you’re serious about computer science and know that computer science is your passion, you belong in Carnegie Mellon University’s School of Computer Science.

Since our founding in 1965, we’ve consistently been named among the nation’s top CS schools. We focus on teaching you computational thinking and fundamentals that will prepare you for internships as early as your first year. We emphasize collaboration. You’ll work shoulder-to-shoulder with the most talented CS students in the country. So when you graduate, you’ll be prepared to walk into any research or industry team and start making an impact from day one. And since we’re part of Carnegie Mellon University, you’ll live and study with some of the world’s top talent in the arts, engineering, business and humanities.

“I am passionate about the impact of technology (algorithms, cloud architectures, statistics, robotics, language technologies, machine learning, computational biology, artificial intelligence and software development processes) on the future of society. We are lucky to live in such an exciting time of change. I am adamant that the Pittsburgh region in general, and Carnegie Mellon more specifically, are right in the center of all this change.”

- Andrew Moore, Dean, School of Computer Science

PROGRAMS

Computer Science (BS)
Computational Biology (BS)

Secondary Majors:
Human-Computer Interaction*
Robotics*

Additional Major:
Bachelor of Computer Science and Arts (BCSA)**

* May be taken as a secondary major only
** Interdisciplinary major offered in conjunction with the College of Fine Arts

SCS Admitted Student Averages

<table>
<thead>
<tr>
<th>SAT-ERW*</th>
<th>SAT-M*</th>
<th>ACTE</th>
<th>ACTM</th>
<th>ACTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>730-770</td>
<td>770-800</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
</tbody>
</table>

Rank 2% GPA 3.91 *Middle 50% range

FACULTY

205 FRESHMEN

176 FACULTY*

The current sophomore class has a female population of 48% — well above the national average of 17%. Overall, 30% of SCS undergraduates are female.

Notable Faculty

> Mary Shaw received the 2012 National Medal of Technology and Innovation and the 2017 Doherty Award for Sustained Contributions to Excellence in Education. The Doherty Award is Carnegie Mellon’s top education award.

> Mahadev Satyanarayana received the 2016 ACM Software System Award for developing the Andrew File System (AFS), the first distributed file system designed for tens of thousands of machines.

> Takeo Kanade earned the 2016 Kyoto Prize for Advanced Technology and the 2017 IEEE Founder’s Medal for his pioneering contributions to computer vision and robotics, including facial recognition and automotive safety.

Popular Freshman Courses

> Fundamentals of Programming and Computer Science
> Principles of Imperative Computation
> Principles of Functional Programming
> Great Theoretical Ideas in Computer Science
**Alumni Accomplishments**

The late professor Randy Pausch (CS 1988) co-founded Carnegie Mellon's Entertainment Technology Center, led researchers who created Alice, a revolutionary way to teach computer programming, and received public fame for delivering *The Last Lecture*, which was later published in book form and co-written by the late Jeff Zaslow (DC 1980).

Kai-Fu Lee (CS 1988) is founder, chairman and CEO of Innovation Works — an incubator for Chinese tech startups. Time Magazine listed him as one of the most influential people in the world saying, “his embrace of social media lifted him from an executive to an icon of online freedom.” He has more than 50 million followers on Weibo and nearly 1.7 million followers on Twitter.

**Student Startups**

- Heather Knight (CS 2016) graduated with her Ph.D. in Robotics from Carnegie Mellon's Robotics Institute and owns Marilyn Monrobot Labs in NYC, which creates socially intelligent robot performances and sensor-based electronic art. She founded the Robot Film Festival and Cyborg Cabaret, and was on the 2011 Forbes List for 30 under 30 in Science.

**DID YOU KNOW?**

1. **Our students learn systems/application skills, but also acquire a deep understanding of theoretical and mathematical foundations of computation, making them highly desirable for both industrial positions and advanced graduate work.**

2. Some of our **most popular student groups** include: the ACM@CMU, SCS4ALL, Carnegie Mellon Robotics Club, Game Creation Society, ScottyLabs and the SCS Entrepreneurship Club.

3. Our **Robotics Institute** was the first of its kind in the world and remains the leader in research, education and innovation in robotics.

4. Starting in 2017, our **Computational Biology Department** will offer a BS in computational biology. The department, the first of its kind to be created within a computer science school, emphasizes developing rigorous and theoretically sound computational approaches to modeling and understanding how biological systems function.

5. Students in the School of Computer Science can study abroad in various locations, including Carnegie Mellon University in Qatar’s CS program, located in Doha’s Education City.

**Research**

**Algorithms for Social Good: Kidney Exchange**

In kidney exchange, a set of patients need to be matched with a set of donors. Given the graph of patient-donor compatibilities, finding even the maximum-cardinality set of exchanges is NP-hard. However, this research shows that empirically efficient solvers can be built and deployed in practice, significantly outperforming other leading solvers on both realistically generated and actual data from the United Network for Organ Sharing. This research won the 2016 Allen Newell Award for Excellence in Undergraduate Research.

**Visual and Geometric Modeling of Lunar Surface Features**

In recent years, the discovery of skylights on the surface of the moon and Mars has driven scientific interest, as they would make ideal locations for human settlement as a shelter from radiation, thermal extremes and micrometeorites. This research develops the software and remote sensing capabilities necessary to generate a high-resolution, 3-D mesh model of a skylight from observations of a landing spacecraft. This research won the 2015 Alumni Award for Undergraduate Excellence.