

COMPUTER ENGINEERING

Every year, computing systems become faster, smaller, and more capable.

As a computer engineering major, you'll be able to comprehend today's technologies and envision those of the future. You'll understand both the hardware and the software that drive sophisticated systems and be able to identify opportunities for future advancements.



"The ECE department works for the students. Professors had the door open for us always."

Rina Binxiu, Computer Engineering '18
Software Engineer, Dell

With a computer engineering degree, you might:



Create the next generation of supercomputers



Introduce new computing systems into objects we use every day



Devise ways to make smartphones even more powerful

Making smart electronics smarter

Artificial intelligence has grown tremendously, but for this field to continue to expand, hardware has to keep up.

Amit Trivedi, a UIC faculty member in electrical and computer engineering, is a leader in this area of hardware development. He and his collaborators are designing a new generation of computer chips that will perform the faster and more precise processing that AI and machine learning require while using little battery power. In another project that reflects the breadth of this field, Trivedi is developing millimeter-sized AI processors to fly insect-size drones.

As a computer engineering student, you can take Trivedi's courses—and your projects will include building small-scale electronic systems that are useful for many AI applications.



CREATIVITY IN ACTION

For our annual senior design showcase, the UIC Engineering Expo, computer engineering students have created:

- ▶ A "smart aquarium" with a mobile app interface that feeds fish and detects water quality
- ▶ A low-cost kit to retrofit existing industrial robots for safer interaction with their human colleagues
- ▶ A 3D radiation-mapping quadcopter that can identify contaminated areas that nuclear-facility workers need to avoid
- ▶ A device that can help an in-home assistive robot to identify trip hazards, such as a folded carpet

