

Experiential engineering education, at scale

The Jacobs School graduates more engineering and computer science undergraduate students than any other school in California. We are #2 in the nation for bachelor's degrees in engineering and computer science awarded to women, and #3 in the nation for bachelor's degrees overall. Here are some of our student stories.



Undergraduates help 5-year-old move arms again

Five-year-old Max Ng was a perfectly healthy boy until, at the age of two, he contracted a rare virus called acute flaccid myelitis. Similar to polio, the virus attacked the nerves in his spinal cord, leaving his arms limp at his sides. Max hasn't been able to lift or lower his arms on his own to use his fully-functioning hands for the three years since. Now, thanks to a lightweight motorized exoskeleton built by four UC San Diego undergraduate mechanical engineering students for their senior project, Max is moving his arms to feed himself and play with his parents. The project was sponsored by Rady Children's Hospital.

Learn more: bit.ly/ElbowOrthotic

Gordon Center celebrates 10 years of engineering leadership

The Gordon Engineering Leadership Center at UC San Diego is celebrating 10 years of developing strong and effective engineering leaders. With the generous support of the Bernard and Sophia Gordon Foundation, the Center provides hands-on engineering leadership training, technical courses, one-on-one mentoring, forums, challenge projects and think tanks for engineering students who are interested in generating new products and creating jobs for the benefit of society. More than 1,400 students have participated in Gordon Center programming since 2009.



Learn more: bit.ly/Gordon10



Engineering success for all students

Forty-one IDEA Scholars crossed the stage with the Jacobs School of Engineering class of 2019 on June 15 to earn baccalaureate degrees in engineering. These students from first generation or underrepresented backgrounds in engineering chose to go above and beyond the already taxing coursework required to earn an engineering degree, and participate in mentoring programs, technical workshops, serve as peer education leaders, and push and support each other through to graduation. Learn about their journeys and the IDEA Engineering Student Center programs.

Learn more: bit.ly/IDEAScholars19

Smart wheelchair and human-centered engineering

A team of undergraduate students from UC San Diego won third place for their research into developing an autonomous wheelchair kit at the Conference on Human Factors in Computing Systems (CHI) in Scotland. Their research aimed to understand the needs of wheelchair users, and develop an affordable, smart wheelchair kit with multiple levels of autonomy that would be useful to them. "Our goal is to make a kit that anyone could build with just basic skills—you don't need to be an engineer or anything," said Jesus Fausto, an electrical engineering student. Their goal is for the add-on kit to cost no more than \$1,000.

Learn more: bit.ly/SmartWheelchairCHI



Student-run startup scales up with seed round

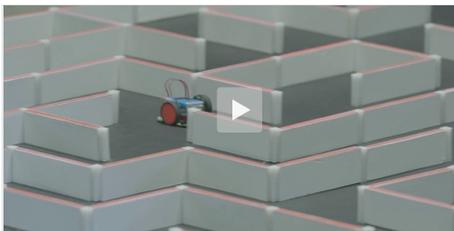
Educational Vision Technologies, founded by UC San Diego electrical engineering master's student and electrical engineering undergraduate alumnus Monal Parmar, is launching a seed round of funding to expand into some of the more than 30 universities on their waiting list. The startup uses computer vision and machine learning algorithms to autonomously generate interactive notes and video from course lectures. On campus, Parmar participated in The Basement's accelerator for student startups, as well as the Institute for the Global Entrepreneur's I-Corps program, funded by the National Science Foundation.

Learn more: bit.ly/EVTSeedRound

Making Art with AI

Could a computer pick up where Mozart left off? Could a machine make videos that look like pieces by Picasso? Students enrolled in UC San Diego's first-ever Machine Learning for the Arts course used methods rooted in engineering to try to answer these types of questions and make art in the process. Robert Twomey, a postdoctoral researcher in the UC San Diego Arthur C. Clarke Center for Human Imagination, taught the class, which is offered by the Department of Electrical and Computer Engineering. Twomey teaches students how to use tools commonly associated with artificial intelligence applications in computer science and engineering to create and modify text, images, drawings, videos and more.

Learn more: bit.ly/ML4artucsd



RoboFest showcases San Diego's robotics community

Engineering students are leaders in UC San Diego's efforts to grow and strengthen the robotics community in San Diego. As part of their effort to bring companies and community members in the robotics field together, Jacobs School undergraduates organized and hosted a weekend-long robotics extravaganza featuring Micromouse, Grand PrIEEE and robocar competitions, as well as technical workshops. "We would like to build that robotics community down here in San Diego," said Sai Komatineni, an electrical engineering student and a RoboFest organizer. "If we can put everything together, it's a time for the community to see what everyone else is building and find out how they can improve further."

Learn more: bit.ly/RoboFest2019

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Contact newsletter editor, Daniel Kane: dbkane@ucsd.edu

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