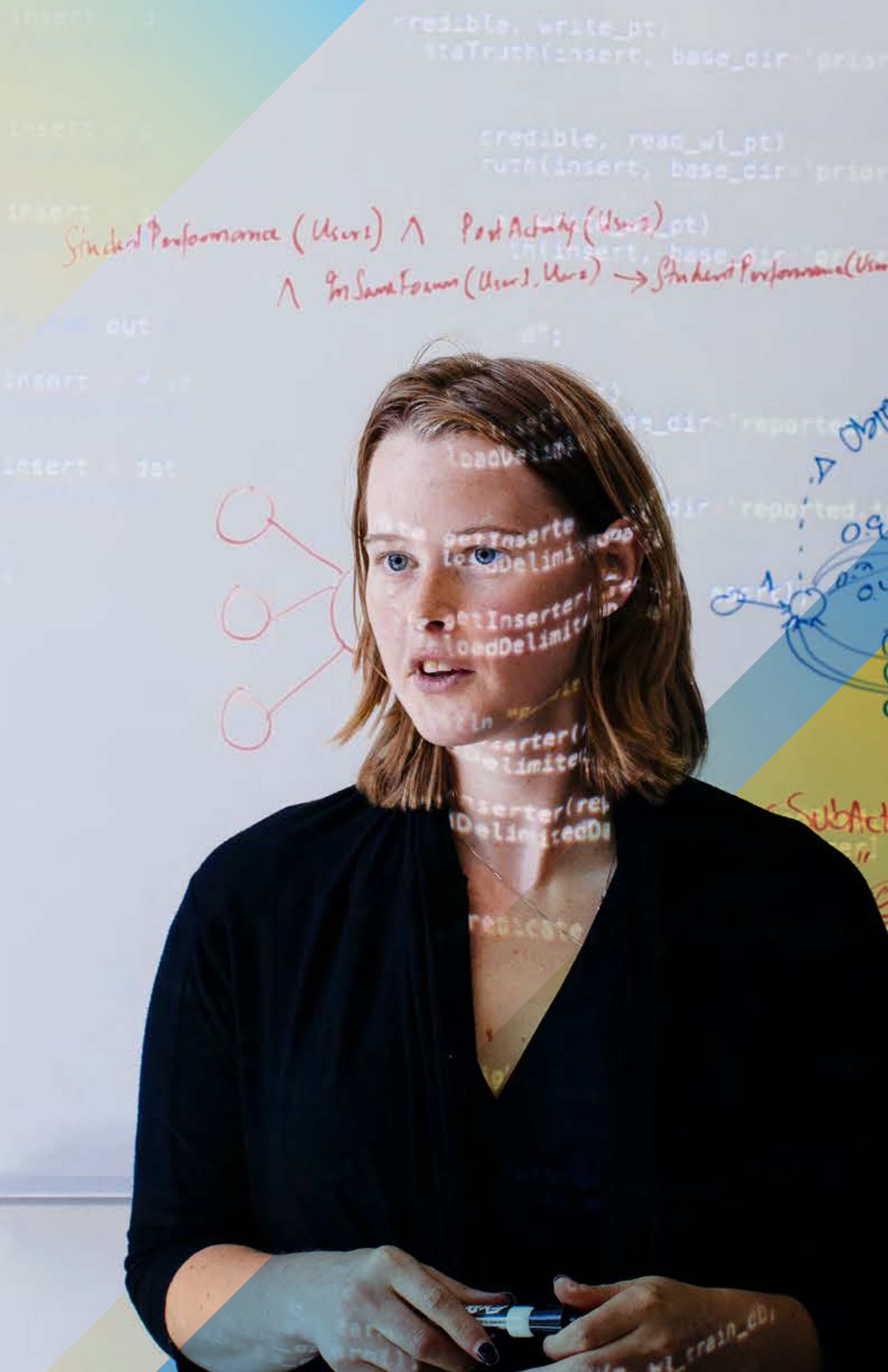




UNIVERSITY OF CALIFORNIA

UC graduate students
tackle questions on issues
critical to California.

Can we use
big data
to prescribe
fewer
pain meds?



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SubAct

UC BERKELEY

A local picture of climate pollution

Chemistry grad student **Alexis Shusterman** has devised rooftop CO2 monitors that she mounts on schools and businesses throughout the Bay Area. The devices map how changes in conditions such as traffic and weather affect local air quality and contribute to the presence of greenhouse gases.

A better understanding of California’s undocumented

Sociology grad student **Esther Yoona Cho** studies an oft-overlooked part of the undocumented community: young Asian adults. She explores how they experience their status as compared to Latinos and other populations, and how the relative lack of visibility affects them in positive and negative ways.

UC DAVIS

Solving the mystery of why seabirds eat plastic

Ecology grad student **Matthew Savoca** studies why marine animals like sea turtles and albatross are drawn to eat plastic they find in the ocean—often with tragic results. The reason: They are lured by its sulfurous odor which, to them, signals a tasty meal.

Helping students succeed in college

Education grad student **Vanessa Segundo** examines which policies work best to support the success of underrepresented students in higher education—and which experiences and types of knowledge they leverage in order to excel.

UC IRVINE

How robots help chronically ill kids stay in school

Camera-mounted robots are giving kids homebound with medical conditions a new way to keep up with their education. Education grad student **Veronica Newhart** studies the health benefits of the technology, which lets students virtually go to classes, hang out at recess and even eat lunch in the cafeteria with friends.

Retraining the brain to reverse paralysis

Mechanical engineering grad student **Sumner Norman** uses rehabilitation robotics together with brain-computer interface technology to stimulate damaged neural pathways and help people with stroke move again.

UCLA

Smarter ways to prescribe pain meds

Health policy grad student **Michelle Keller** identifies how doctors prescribe painkillers by analyzing big data. This information could help health systems cut down on unneeded opioid prescriptions and flag those at risk for getting hooked.

What makes a great teacher?

What teachers think works in the classroom isn’t always the same as what students value most. Education grad student **Brian Woodward** seeks to identify the practices that high school students perceive as great teaching and how those factors spur learning and academic success.

UC SAN FRANCISCO

How dangerous is a sunburn?

The explanation may lie in your cells. Biochemistry grad student **Emma Powell** studies how a cell’s stage in the division cycle may affect its resiliency in repairing DNA damage from sunburn, which has been linked to higher cancer risk.

Targeting cells to take on diabetes

In the case of Type 1 diabetes, an overactive immune system destroys the body’s ability to make insulin. Biomedical sciences grad student **Dan Holohan** tests targeted, molecular therapies that could activate those cells charged with refereeing the immune system and blowing the whistle when it overreacts.

UC SANTA BARBARA

Powering the use of electric vehicles

One way to make electric cars more convenient? Let people plug in at work. Environmental sciences grad student **Victoria Greenen** is advising state officials on a plan to equip offices and public parking with infrastructure so people can use the workday to recharge.

Educating a multilingual state

Students in California classrooms speak dozens of different languages. Education grad student **Lois Harmon** looks at how teachers can support students to ensure language is not a barrier as students tackle coursework in the upper grades.

UC SANTA CRUZ

Banking rain for dry years

What if we could collect water during floods and store it underground until the next drought? Earth sciences grad student **Sarah Beganskas** works on ponds that do just that—collect heavy rainfall that would otherwise overwhelm creeks and hillsides, remove pollutants as water seeps into the ground, and refill California’s groundwater supply.

What is killing the California condor?

Recently returned from the brink of extinction, these iconic birds are still struggling to recover. Microbiology grad student **Zeka Kuspa** has found one culprit: lead from bullets, lodged in the animals the scavengers favor. The lead poisons many outright while also compromising the health of those that survive.

UCLA

Driving Latino participation in politics

Political science grad student **Angela Ocampo** is seeking to identify the factors that motivate Latinos in California to become active in politics. She looks not only at what works to get them to the ballot box, but on to the ballot itself—and then on to victory.

Making sure justice isn’t lost in translation

Serving the millions of people who don’t speak English has long been a challenge for the court system. Anthropology grad student **Sonya Rao** looks at how improved employment practices for legal interpreters could translate to justice better served.

UC MERCED

What helps teens avoid drugs and risky sex?

Psychological sciences grad student **Patricia Cabral** looks at the cultural traditions and social processes that help Latino teens stay out of trouble. By following thousands of Latino adolescents from fifth to 10th grade, she found factors rooted in close-knit families and communities deterred them from risky health behaviors.

How much water is in a tomato?

Environmental systems grad student **Lorenzo Booth** uses a measure called the water footprint to compare the resource demands of crops by location and agricultural practice. The information could help drive both farming and consumer choices.

UC RIVERSIDE

Creating more powerful solar cells

Physics grad student **Fatemeh Barati** studies ultrathin materials—only one atom thick—that could prove much more powerful than today’s technology in capturing and storing energy from the sun.

A not-so-hungry caterpillar

Kids may not like to eat their veggies, but unfortunately for farmers, bugs do—resulting in billions of dollars in crop loss each year. Botany grad student **Irma Ortiz** has developed tomatoes that produce a protein caterpillars find unappealing. The result could mean fewer crops lost to insects and more for salad bowls around the world.

UC SAN DIEGO

Better preparing for drought and flood

What is behind all this extreme weather? The answer lies, in part, in the changing patterns of wet air that comes to California from the tropics. Oceanography grad student **Tashiana Osborne** is measuring and mapping the changes to help officials predict and prepare.

Accounting for the uncounted

Why do people opt out of the census? Communications grad student **Jahmese Fort** looks at how some groups boycott the headcount as a means of political activism—to affect how the government allocates resources and funds.

Our graduate students are a force for the innovation that keeps California on the forefront.

**How can we
bank heavy
rains for
dry years?**



Together this fall, **we enrolled 7,500 more California undergraduates than last year**—the largest one-year increase in resident enrollment since World War II, **exceeding the state’s 2015 goal for UC by 1,100 students.**

This year, we would like to partner with you to continue to increase access to a world-class education for California students. **In addition, we need to grow enrollment of graduate students** who provide critical teaching support, conduct cutting-edge research and fulfill the state’s workforce needs.

Please support the **Governor’s budget proposal for a 4% adjustment to UC’s operating budget and Proposition 2 funds for the UC retirement program.**

To meet enrollment demand, UC is also requesting:

- \$25 million for an additional 2,500 California undergraduate students
- \$9 million for an additional 900 graduate students
- \$35 million in one-time funds for deferred maintenance

With your help, we can

