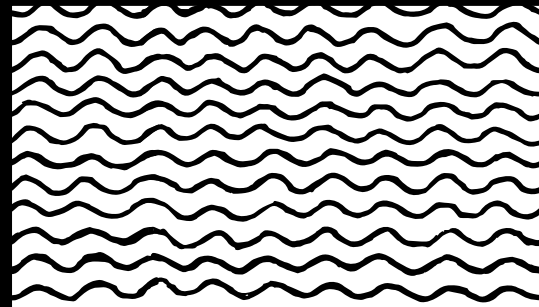
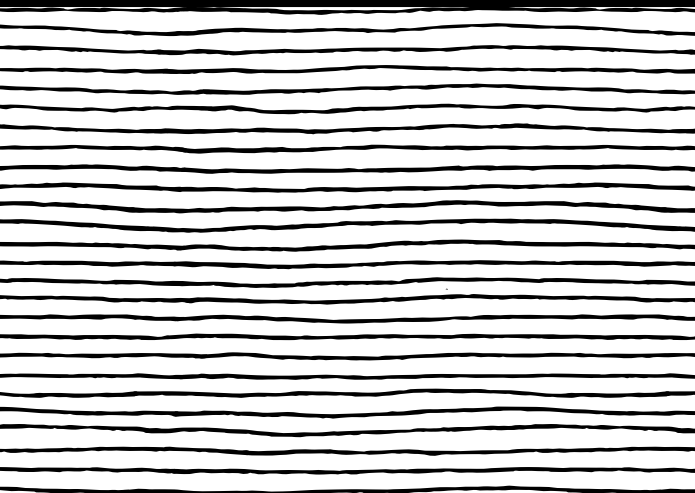
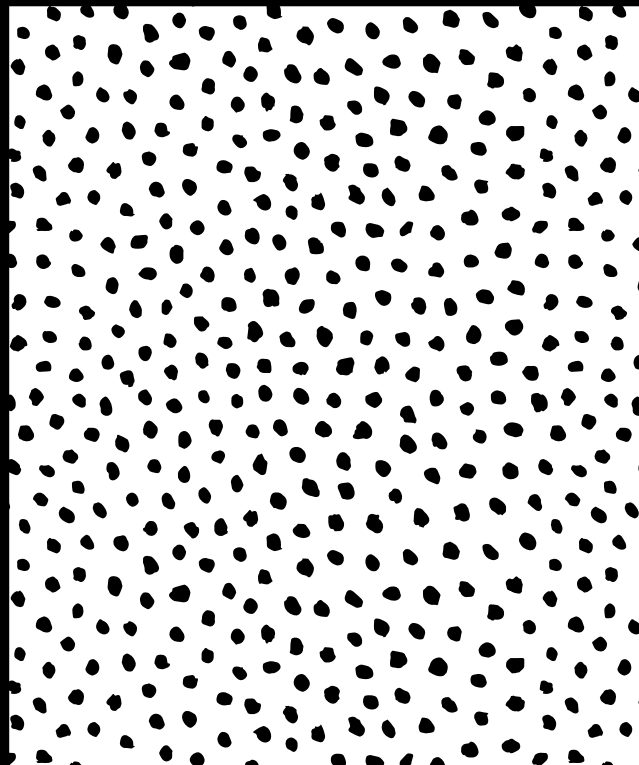
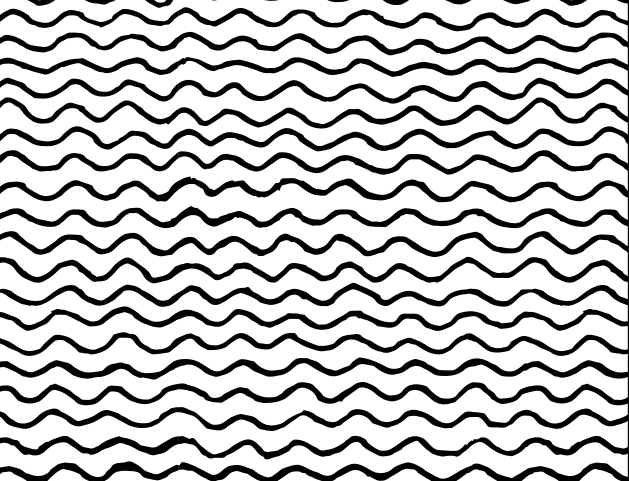


**12 WAYS UNIVERSITY  
OF UTAH STUDENTS ARE**

# **CHANGING THE WORLD**

**STUDENT  
INNOVATION  
@ THE**





# 12 Ways U Students are Changing the World

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# Welcome from the President

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In 1850, just three years after they arrived in the Salt Lake Valley, the founders of the University of Utah created a modest institution of higher education to ensure a prosperous and fulfilling future for the people living here. From that humble beginning grew a major research university with global stature. Throughout decades of growth and change, the university has maintained its commitment to inquiry, innovation and public service.

This year, due to the extraordinary efforts of

our students, faculty and administrators from colleges and departments across campus, the U is celebrating its biggest year ever in research funding — \$515 million for projects addressing a wide range of issues, from non-opioid painkillers to geothermal energy in Utah.

In this publication, you'll read about students who are part of the U's innovation engine. These students are taking full advantage of the world-class learning opportunities available at the U to bring new ideas from

imagination to reality. Our student innovators come from across campus, representing diverse disciplines and interesting collaborations. The students highlighted this year exemplify what is possible when curiosity, passion and talent are encouraged and guided by world-renowned experts.

I encourage you to explore their work and see what future ideas may shape our world. I also invite you to imagine, then do.

— President Ruth Watkins

**STUDENT  
INNOVATION  
@ THE**



# About “Student Innovation @ the U”

“Student Innovation at the U” is an annual publication celebrating student innovation and impact at the University of Utah. A digital version is available at [lassonde.utah.edu/studentinnovation2019](http://lassonde.utah.edu/studentinnovation2019). This publication is produced by the Lassonde Entrepreneur Institute, an interdisciplinary division of the David Eccles School of Business and the hub for student entrepreneurs and innovators at the U. Learn about the Lassonde Institute at [lassonde.utah.edu](http://lassonde.utah.edu).

This publication is managed by staff at the Lassonde Institute, including:

**Troy D'Ambrosio** — executive director, Lassonde Institute; assistant dean, David Eccles School of Business

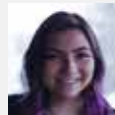
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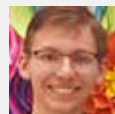
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Have a question? Want copies? Want to nominate a student to be featured in the next edition? Or want to be a contributor? We want to hear from you! Contact editor Thad Kelling

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DAVID ECCLES SCHOOL OF BUSINESS



# #1

## LAUNCHING A COMPANY

### PreOv is Changing the (Fertility) Game

The team behind **PreOv**, a student startup developing fertility solutions for women, is comprised of studious, family-driven, career-oriented women. **Joni Aoki**, **Jean-na Ryan** and **Young Hong** are all studying at or have graduated from the U. Ryan is the president and CEO of PreOv. She has an MS in nutrition, master's in computer information systems and master's in physician assistant studies. Aoki is the CFO with tax accounting and FP&A experience, and Hong has a BA in psychology and is currently a student at the U's pharmacy school.

Most fertility detectors use basal body temperature, a person's lowest body temperature at rest, which Aoki,

Ryan and Hong discovered can be difficult to track and interpret. The three women consulted doctors and other medical professionals, concluding that tracking cervical mucus could be used to predict ovulation with more advanced notice. Eventually, the trio came up with an intravaginal ring with sensors to measure hydration of the mucus. Their goal is to connect this ring to an app through Bluetooth, where this information will be charted and create a "wealth of data" for every user.

They are currently searching for investors to fund the final design and manufacturing of their product so they can move on to FDA testing.

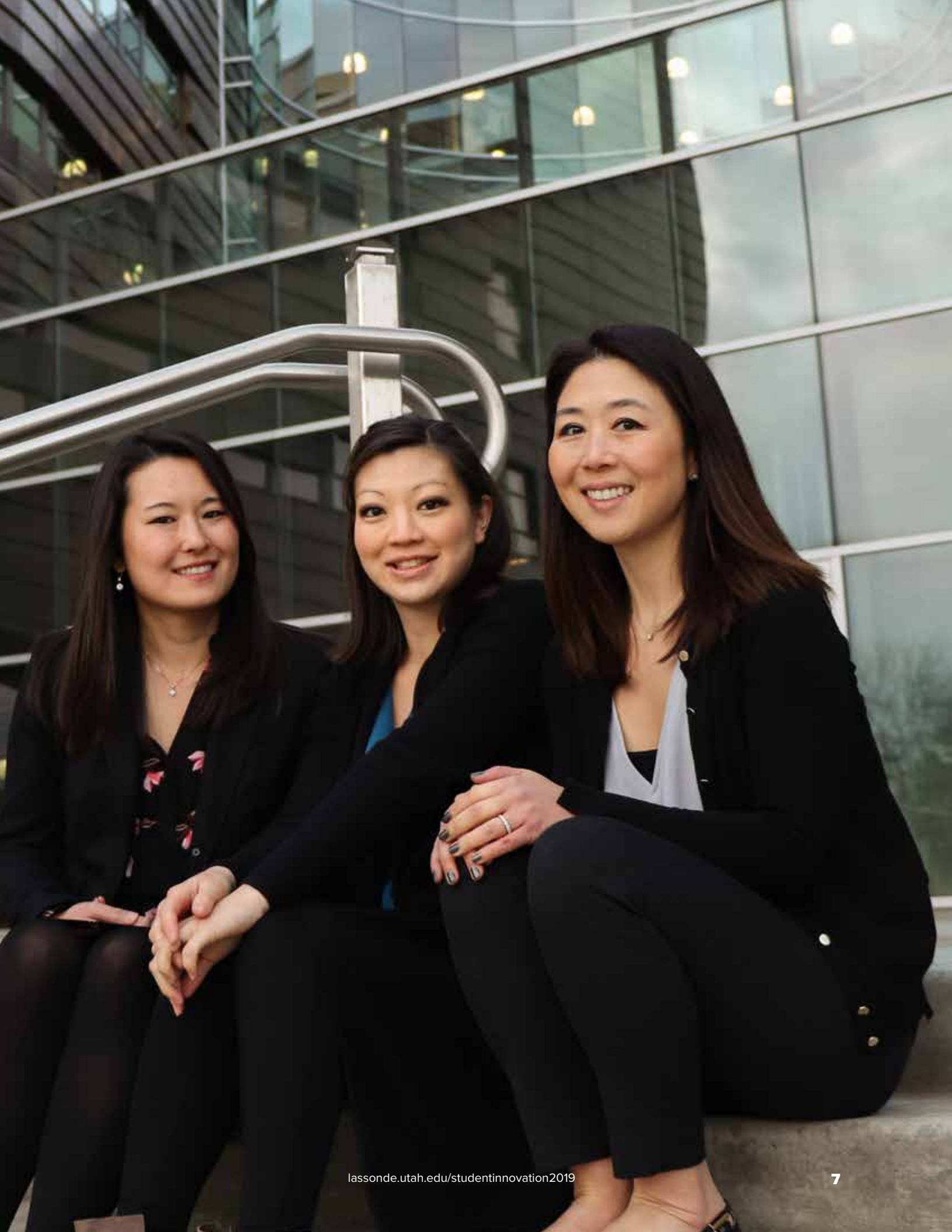
Their entrepreneurial

journey started with a flier from Bench to Bedside, a student medical innovation competition provided by the **Center for Medical Innovation** at the U. From there, the trio met to brainstorm ideas for the competition, at the time thinking it would only be a small side project. They eventually came to a topic they were all passionate about: fertility. "A lot of women and couples have a difficult time getting pregnant. Chances of conceiving decrease with age. We decided to start a family later in our careers, which is why we felt it was a problem a lot of other women may be facing nowadays," Ryan said.

PreOv won first place and \$50,000 at the Bench to

Bedside competition in 2018, as well as \$5,000 at the U's Opportunity Quest, provided by the **Lassonde Entrepreneur Institute**, in early 2019. However, it is more than just encouragement from these competitions and mentors that keep them going; PreOv continues to be the passion of these women due to their proximity with polycystic ovary syndrome, women who were looking for non-hormonal contraceptive aids and their desire to bring attention to women's health. The prize money was an indicator that the product was marketable, but even without it, they felt that it would have been a shame to not pursue development.







## Cards & Books for Special Occasions

"What are you giving your dad for Father's Day?" asked **Miles Petty**, an MBA student at the University of Utah, to an unsuspecting audience at the beginning of his pitch for **The Care Tree** at one of the **Lassonde Entrepreneur Institute's** Get Seeded events.

"You don't know yet? Well ..." and then, to the surprise of the crowd, he followed up with a poem — rhyming "shirt or tie" with "the look in his eyes," "the surprise," a line about all the browser tabs and sites it takes to find a good gift — that ended with an introduction of his business, **The Care Tree**.

It was only appropriate that Petty incorporate a poem into his pitch — his startup has published two illustrated gift books that could be described as children's books for adults. The first, a love poem called "I Love You Like ..." considers a range of similes for love, from the whimsical to the sentimental: "I love you like

H2 loves O," or "I love you like a roof loves walls / I want to stand tall and hover above you / to cover you ...." The second, an ode to the sacrifices of a mother, has seen great results — "100 percent of mothers that read it smile, and 50 percent cry," Petty said.

The products seem to be doing well — not only did **The Care Tree** win \$2,000 in funding for its milestone at the Get Seeded pitch, but several audience members wanted to buy on the spot from among the books and original greeting cards he had on display. The goal of the company is to grow from these current offerings to books for every big life event, along with cards, prints and other items — to be a one-stop-shop "you can go to and know you'll find a thoughtful gift for any occasion."

You can find more poems on Instagram [@thecaretree](https://www.instagram.com/thecaretree) and learn more about the business at [thecaretree.com](http://thecaretree.com).



## Helping People Sit Up

As music performance majors, students often face the question: What are you going to do with that? Looking back, **Stella Markova's** answer might be unexpected. The University of Utah student has dedicated the last year to creating a home-care product with help from the **Lassonde Entrepreneur Institute**, **SitUP**.

Markova's husband first came up with the idea of an inflatable bed pad while caring for his father. The couple saw a need for an easy-to-use and affordable device to help caretakers do their job better after some research revealed limited options. **SitUP** will be a bed addition, which inflates via an electronic remote. Basically, it is a wedge pillow, but unlike most wedge pillows, it inflates. It sits under the patient's back on the bed, flattened, and the remote

inflates the wedge, lifting the patient to a 45-degree angle. This would give the patient control over when they want to sit or lie down and prevent the caretaker from injuring themselves trying to lift their patient.

"It's a cross between an adjustable bed and a wedge pillow," Markova explained. "Increasing healthcare costs drive the need for less costly home health care, as well as affordable homecare products. Home health care needs it because they need affordable options to help them help others." Markova started by talking to home health care providers and was overwhelmed by the response. "Everyone we talked to was like 'you have to do this, you have to make it, this will help a lot of people,'" and she has been working on it ever since.





## Savor while Saving

Food is a central part of the college experience, and really, the life experience. Throughout our lives we are concerned with food, and the older you get, the more you think about where to get it.

**MounTins** solves this problem in a fun and innovative way.

Founded by **Aaron Dobron** and **Austin Scaccianoce**, MounTins makes eating out fun. Dobron is majoring in material science and engineering

with an emphasis in multidisciplinary design. Scaccianoce is majoring in entrepreneurship and multidisciplinary design. You can find their office in **Lassonde Studios**, where they are continuously working on improving the eating experience.

Here's how it works: You purchase a tin for \$30. Inside are 20 coasters, each uniquely designed by the two company founders, corresponding to 20 restaurants in Park City.

Each coaster is good for \$10 off at the restaurant it depicts. You can slip them in your pocket for a post-skiing snack or play a game of dinner roulette. They make great gifts, a fun adventure and a less expensive meal.

MounTins is a relatively inexpensive gift worth a \$200 value. It takes the endless debate out of the age-old problem of where to go for dinner. Plus, you can branch out and try some local cuisine when

your routine gets boring.

Dobron talked about their original idea: "We wanted to promote all the locally owned and operated restaurants in Park City. There are about 160 different restaurants up there, but tourists tend to target Main Street and miss some of the other options."

Learn more and purchase a set of MounTins at [moun-tins.com](http://moun-tins.com).





## Intra-Abdominal Pressure

The pelvic floor is made up of muscles that support organs like the bladder and uterus. When this floor is weakened by excess abdominal pressure, these organs can slip outside of the cavity, causing pelvic floor failure. This disease is becoming increasingly prevalent — one in four women will experience symptoms of pelvic failure, while one in nine will undergo surgical correction.

Until recently, intra-abdominal pressure was measured with a catheter. This process required a large machine, and was uncomfortable and time-consuming. **Stefan Niederauer**, a biomedical engineering Ph.D. candidate at the U, along with the rest of professor **Robert Hitchcock's** lab, has developed a less invasive, portable device that, when inserted into the upper vagina, measures intra-abdominal pressure. Over the last few years, this device has been used to

study the intra-abdominal pressure in women having their first child. The results of this study sparked the pairing of the device and the physical therapy department's motion capture technology to learn how to improve every day motion.

"Through the MOCAP study, we'll develop a model that will tell us that one person leaned out an extra foot than another person and generated this much more pressure," Niederauer said. "We'll be able to provide recommendations for people who do repetitive tasks. For example, if nurses lean over beds to change IVs, we can recommend they move in a certain way to protect their pelvic floor."

The results of this pilot study, which features 10 women, will be used to create a comprehensive set of recommendations to help mitigate the chances of contracting pelvic floor disorders.

# #2

## RESEARCHING AN ANSWER



## Making Research More Inclusive

The University of Utah has various ways for students to get involved in the Tier-1 research conducted all over campus. When **Jae Miner**, a senior in anthropology, learned about the **Undergraduate Research Opportunities Program (UROP)** at the U, they (Miner's preferred pronoun) jumped on it.

"I did anthropology research with human subjects, where I studied oral histories and disabilities across cultures," Miner said. "It was the first time that I had been involved in research as anything other than a participant, and it really ignited a passion in me."

After their research project concluded, Miner wanted to stay involved. UROP supports a cohort of Undergraduate Research Leaders each academic year, who guide students through the research process. Miner was selected to be a research leader, and given a brand-new distinction: the Institutional Review Board (IRB) liaison. Miner has spent the last year using this position to bring awareness and change in

research for queer/disabled individuals on campus. Miner has compiled a packet that summarizes the IRB standards for ethical research to help streamline the process for students conducting research on campus, as well as organized an panel through UROP's undergraduate education series, titled "Queering Research."

"The panel includes queer researchers, research participants and staff from LGBT resource centers who have either done research or participated in it, so it covers the whole spectrum. We'll talk about how to get more researchers in the field, and what ethical research looks like when you're queer."

Miner says their biggest impact, though, has been visibility.

"One of the things that I think I have changed is the perception of queer and disabled people in research. There's not a lot of researchers who are queer or disabled, so just being visible as a researcher is powerful."



## Saving Water & Energy

**Konstantinos Oikonomou** has always been passionate about promoting environmental consciousness. When he began his Ph.D. in electrical engineering at the **Utah Smart Energy Laboratory (U-Smart)** at the U, he was introduced to gaps in the use of water and energy globally.

"The problem that water and power utilities face is that they have been designed and operated as two uncoupled systems," Oikonomou said. "In reality, these systems are mutually interdependent. Water is utilized, often in large amounts, in energy sectors for mining, fuel production, hydropower and power-plant cooling. On the other hand, energy is an indispensable component of the water facilities, as electricity is used for pumping, treatment and distribution of water."

Oikonomou and his Ph.D. advisor, professor **Masood Parvania**, have developed models that are applicable to different environments, from the U's campus to countries in Africa, which demonstrate how a joint effort between water and energy utilities can reach to more sustainable operation of the infrastructure, and increase energy efficiency and water conservation. The next step is to apply these models to the real world.

"The final product will be a tool that can take real time control decisions on how to better dispatch energy and water to reach optimal use," he said. "For example, when excess of water storage due to rainfall or seawater is available, we can use our tools to begin the appropriate water treatment or desalination processes."



## Modern Dance & Social Justice

**Aileen Norris** is a senior at the University of Utah double majoring in English and modern dance. For her honors thesis, Norris explored how movement can act as an activist role, and in what ways dance can impact the social justice movement. "In the dance community, it's a very tricky realm to navigate. It can be seen as tacky if you try to make dance work that is about a specific issue," she said.

Norris drew her inspiration for her thesis project from incidents

of gun violence in the United States. "When the Pulse Night Club shooting happened in 2016, I was really affected," she said. "I needed to process it in an artistic way." After the Parkland shooting, she decided she was ready to take on the issue through creativity.

After she graduates, Norris hopes to work as a freelance dance artist as a performer, as well as incorporating other elements of dance into her life, such as choreography, production and dance writing.



## The Sinners We Are

**Alexis Rausch**, a fine arts student at the University of Utah, is bringing elements of psychology into her art in order to emphasize the beauty that can be found in ugly concepts. "I make work about the way we consume violence and violent media as a society, and what role we play as perpetrators or victims within the larger scheme," she said.

Rausch's art explores the physiological impact in humans when viewing violence versus experiencing other types of physical

intimacy. She utilizes variations of Baker-Miller pink in her pieces, a shade of pink that has a physically calming effect after 15 minutes of exposure. "I'm expressing violent imagery, but I'm removing the violent parts and replacing them with this shade of pink," she said. Rausch especially uses this technique in her textile art, creating comfort objects out of blankets and clothing, as well as other narratively inherently violent objects.







## Jazz at the Cafe

In fall 2019, the Lassonde Entrepreneur Institute and the School of Music launched **Jazz at the Cafe Lassonde** to bring live music to Lassonde Studios.

This collaboration provides students across campus the opportunity to hear great jazz music, some for the first time. It also gives performance experience for jazz majors and allows young musicians to jam with more experienced players, including a guest soloist.

"Sessions like these have a unique way of bringing together people

from different backgrounds and facilitating a collaborative artistic experience," said **Kris Johnson**, director of Jazz Studies for the School of Music.

Jazz at the Cafe is the product of converging interests across the university. Johnson wanted to give his students more opportunities to perform for audiences. **Kathy Hajeb**, a director at the Lassonde Entrepreneur Institute, wanted to bring live music to Lassonde Studios. And former university **President David Pershing** wanted to build a sense of community and give students reasons

to gather on campus.

During Jazz at the Cafe, students in the **Michie Jazz Quintet** serve as the house band. Outside of Lassonde, the Michie Jazz Quintet also performs at local community events and other venues throughout Salt Lake City. The current members of the Quintet include **Anaís Chantal** (vocals), **Evan Taylor** (trumpet), **Tony Elison** (piano), **Alicia Wrigley** (bass) and **Matt Wilson** (drums).

Jazz at the Cafe also provides opportunities for music technology students to develop skills in sound system design.

**Mike Cottle**, a professor of music technology, directs a group of students to livestream each performance. Each performance also includes a jam session, where students of all ages and ability levels can play together.

"Jazz music requires compromise, communication and finding common ground in order to improvise on stage in front of an audience," said Johnson. "It's a beautiful exchange that is often non-verbal, yet deeply profound and transformative."





## A Futuristic Privacy Garment

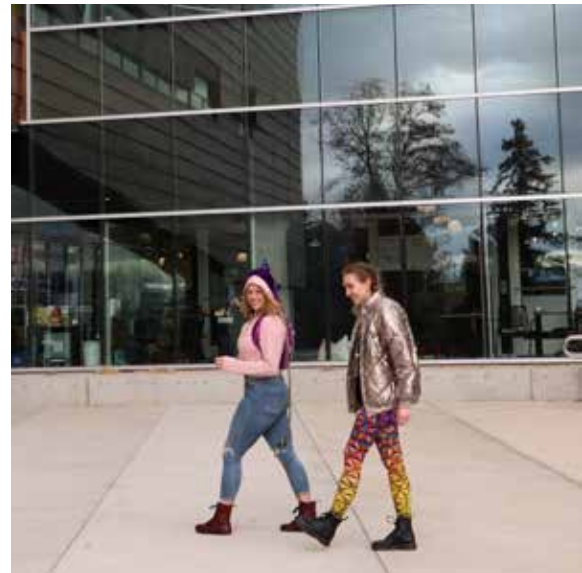
Anyone who has squeezed into a crowded airplane knows that travel can be a serious invasion of privacy. The average person reserves a 12-foot radius for social space, and ever-shrinking travel accommodations rarely leave room for a personal bubble.

**Jackson Kerbs**, a junior studying multi-disciplinary design, combined his interests in product design and fashion to address this problem. He created a garment that allows for greater privacy while traveling in public spaces. The design, which resembles an oversized sweatshirt, includes a hood and veil over the face and drawstrings that cinch at the arm and waist. While sitting down, the garment can easily cover up a person's entire body, preserving warmth

and maintaining personal space. The fabric, made of felt, is winter-ready and designed for maximum comfort.

Kerbs went through several prototypes before finalizing the current design. The original drawings included a full mask and helmet, but Kerbs slowly adapted his creation to better fit the context of use. He ultimately decided on a garment that provided extra privacy while discreetly blending in with everyday streetwear.

Though only one garment exists right now, Kerbs plans on tweaking the design and streamlining the production process. Until then, we will have to wait until this garment turns public transportation from a slog to a sanctuary.



## Customizable Bags

**Kristen Kessler** and **Isabel Kinikini** are unashamed to be themselves. Kessler and Kinikini channeled this ideology into entrepreneurship with their company, Cadre, an evolving lifestyle brand that specializes in bags meant for music festivals and camping. "Cadre" means a small group specially trained for a particular purpose. They chose this name because they felt it best represented their current product of modular, customizable bags and their future products.

Kessler is a sociology major with a minor in entrepreneurship and Kinikini is exploring design and strategic communication.

The team is receiving support from the **Lassonde**

**Entrepreneur Institute** at the U and continues to work with Randal Thompson, a serial entrepreneur, as well as Brad Williams, their current advisor; they attribute their hope and energy to the people they have connected with through these experiences as well as those within the music community.

"The sky is not the limit; your perceptions of reality are," Kessler said. "You are in charge of your own life; you are learning to become your own person."

"It just changes you; maybe you've had that love and attention and support, but being reminded as an adult is something everyone needs in order to lead a fulfilling life," Kinikini added.





## Accessible Social Work

When **Torle Nenbee** was 11 years old, her family came to Utah as refugees.

"I started school in the sixth grade," she said. "People didn't understand why I couldn't speak — if you don't quite know the language, people think you're stupid." This barrier didn't stunt Nenbee — it motivated her. She taught herself English from reading the dictionary and watching children's movies.

"I've always just looked back on my experience on how generous and kind people were, how they helped me through that journey," she said.

Now, Nenbee is finishing up her master's of social work degree at the U. During her master's, she interned with University Neighborhood Partners, where she met

program alumni, refugees, immigrants and English as a Second Language (ESL)-background individuals unable to pass the Association of Social Work Boards' (ASWB) licensure exam. Nenbee discovered a lack of institutional support for these individuals, who were failing the exam despite successful undergraduate and graduate careers.

"The test is very biased," she said. "It's only in English, and the phrasing is a huge barrier."

Bills have been proposed to the Utah state legislature to provide dictionaries to test-takers, but Nenbee didn't think that would be enough.

"To prepare people for this exam, you have to start from the very first semester," she said.



## From Lab to Park Bench

When **Andreana Holowatyj** was a doctoral student in Detroit, she encountered a patient in the clinic diagnosed with cancer who was also experiencing homelessness. Though he had free treatment, he could barely afford to get on the bus to make his appointment. This interaction inspired her to ask what "the burden of cancer looked like" for individuals experiencing homelessness. In a subsequent research study, she reported significantly higher proportions of distinct cancer types — cancers of the lung and cervix among homeless men and women — compared to the individuals not experiencing homelessness.

Holowatyj is now a Susan Cooper Jones Endowed Fellow in Cancer Research and a master's student in clinical investigation at the U and **Hunstrman Cancer Institute**. She has extended this passion to research to the population of individuals experiencing homelessness in Utah. Her study is the first of its kind to evaluate homelessness and

cancer in the Mountain West. This ongoing study examines the burden of cancer in a new environment, providing a useful comparison to her work in Detroit and also shedding light on unique challenges that individuals who are homeless at diagnosis face in Utah. Holowatyj hopes her research will inspire awareness and emphasize the importance of providing resources to these medically underserved populations.

Holowatyj was not content to publish her findings and walk away: "I felt compelled to take 'science to society,' to go from the 'laboratory bench to the park bench' and act to create improvements in our community."

She decided to start a project to "de-FEET homelessness" by establishing a sock drive for individuals experiencing homelessness in Salt Lake City. She started with a goal of collecting and distributing 100 pairs of socks herself. Instead, her passion and persistence multiplied the final result to 1,413 pairs of socks, along with toiletries and hygiene kits.


**“If we can produce them cheaply enough, we could even supply refugee camps where thousands die from Malaria.”**

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**#6**

**EMBRACING  
OUTDOORS**





## The Tent Hammock

After a frustrating and nearly treeless camping trip to Goblin Valley in 2016, University of Utah students **Daniel Goldfinger** (geography) and **Nick Bierwolf** (mechanical engineering) came up with the idea for a “Tammock” – a device that combines a tent and a free-standing hammock that doesn’t require trees to work.

They are now developing the product, which features a lightweight frame and an easy-to-assemble design. They also launched the company **LIT Outdoors**. “LIT” stands for “life in tents.”

“Now in pre-sale development, our Tammock has applications for anyone who sleeps on the ground,” Goldfinger said, “with plenty of room for storage, or a wet dog.”

Goldfinger and Bierwolf are also exploring ideas to promote social positivity, using Tammocks at concerts, painting them in university colors and licensing them to schools as a place for students to relax.

“If we can produce them cheaply enough, we could even supply refugee camps where thousands die from Malaria caused by crappy sleeping conditions,” Goldfinger said. “Maybe we could decrease the number of people who die each year.”

LIT Outdoors has received support from the **Lassonde Entrepreneur Institute**, including office space from the Company Launch program and grants from the Get Seeded milestone grant program.

# Yellowstone Forever

This year, a group of students studying multi-disciplinary design worked with **Yellowstone Forever**, the nonprofit arm of Yellowstone National Park. These students traveled to Yellowstone National Park to interview rangers and staff and get inspiration for their own design. They then developed a diverse array of projects designed to enhance the experience of traveling to Yellowstone. Here is a sampling of those student projects:



## Ranger+

While millions of visitors enjoy Yellowstone every year, certain groups are less able to enjoy the outdoors.

**Emme Nelson** researched this issue, and found that marginalized communities experience more barriers in visiting national parks. This has been an issue since Yellowstone became the first national park and the first park rangers were exclusively male. Nelson wanted to develop a project to help park goers who were not white, male, able-bodied or wealthy. She said, "I wanted to create a

platform that would allow people of all different backgrounds and different communities to engage with the outdoors in a way that is beneficial to them."

Nelson created **RANGER+** to provide a physical space for underrepresented groups within national parks. Here, people could find inexpensive gear rentals, educational opportunities and community events. She hopes **RANGER+** could foster discussion and address challenges within the parks system. Currently, she is begin-

ning to develop a print publication and social media platforms to complement the physical locations.

Nelson hopes to see better representation, greater access and more diversity within the national parks and the outdoor community in general. She said, "You can't be what you can't see," and with **RANGER+**, she hopes that more people can see themselves in Yellowstone.



## Distance Learning

When **Steven Calhoun** visited Yellowstone, he realized that many do not have physical access to the park's beauty and wildlife. He wanted to use Yellowstone to educate others, even if they couldn't visit the park themselves.

Calhoun created a distance-learning portal for students across the country. His content was targeted at fourth to sixth graders. He chose this age group because, "Their minds are still kind of malleable. They are still developing their moral compasses and are trying to figure out

life for themselves beyond what their schools or parents are teaching them."

Calhoun developed modules: plants and wildlife, conservation, and culture and history of Yellowstone. He wanted to make his portal more interactive than a typical classroom lecture. The content is based on what he calls "environmental design thinking," where students learn an idea, develop a hypothesis and come to their own conclusions about source material. Students could choose lessons based on their

own interests, so each participant would have a totally unique learning experience.

Calhoun hopes these lessons can use the environment and culture of Yellowstone to teach valuable lessons about science, natural history and conservation. He has already conducted user testing, and students have excitedly asked for more content. He hopes to continue developing this platform, and Yellowstone Forever has asked for his assistance in educational and technological development.





## Visitor Communication

**Christian Pugsley** noticed that many tourists visiting Yellowstone from foreign countries struggled with a communication barrier, especially with signs and information throughout the park. This raised safety concerns — signs often warned against wild animals or dangerous land features — and detracted from visitors' experiences.

Pugsley audited existing signage in the park to develop new solutions. He classified information into three main categories: prohibitive, cautionary

and informative. After auditing signage from the top visiting countries, he gave each type of message an assigned color and shape, creating easy and recognizable visual shorthand for visitors.

Pugsley's solution is compatible with the current Yellowstone app. He incorporated push notifications, NFC touch-to-read technology and location-based technology to provide up-to-date, easily accessible information to visitors in their native language. With GPS technology, the system is able to

send notifications to cell phones within a certain radius, warning them of nearby danger. He also developed beacons that could be scanned on a phone to provide additional information via NFC technology. His design, which does not require cell phone service or Wi-Fi, could be implemented throughout the park with very little effort or resources. Pugsley hopes his ideas will be integrated into existing park infrastructure, allowing all visitors to have a safe and enjoyable visit in Yellowstone.



## Translating Research

**Jordan Rasmussen** was fascinated by thermophiles, bacteria that colored many of the springs in Yellowstone. But when he tried to learn more about them, he hit roadblocks. The research on thermophiles was so full of difficult scientific language he could hardly understand it.

Rasmussen realized that many people like him wanted to learn more about research, but had a hard time grasping dense scientific literature. When he talked to researchers,

he could feel their passion for research, and he wanted to translate this enthusiasm to the general public.

Rasmussen is developing a platform, including a website and app, that explains the research conducted on public lands. (Currently, there are about 150 research projects every year in Yellowstone.) He created navigation tools that allowed people to look up research by location, park, or topic. Research projects were paired with an individual profile, which described

the concept in concrete, simple terms, explained the project's relevance, introduced the research team and linked to places to find further information.

Rasmussen hopes his work will help people identify and engage with scientific advancements in public lands. His project has the power to educate people both inside and outside the park's physical boundaries.



## Making Breastfeeding More Comfortable

Started by University of Utah MBA student **Nana Ewusi-Emmim** two years ago, **NipaYe** is a breastfeeding-help company focused on assisting mothers to produce milk for their babies. With help from the Lassonde Entrepreneur Institute, she is developing a tool she hopes will be more comfortable and easier to use than what is currently on the market.

Ewusi-Emmim found issues with the current at-the-breast supplemental method following the birth of her first child. She discovered

he was starving because he wasn't getting enough milk. With some research and experimentation, she saw that the current products on the market were not optimal for her needs.

"I started to wonder why there isn't something better on the market and that is what caused me to start this project," she said.

Current breastfeeding tools do not cater well enough to what many mothers need. Existing products are susceptible to leakage and attach to the breast by

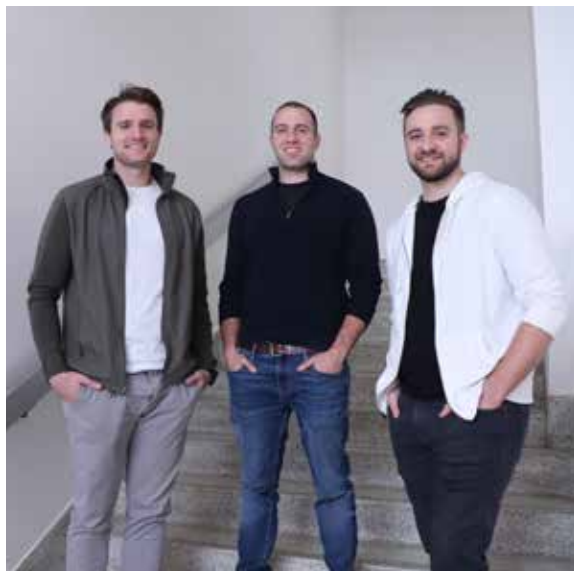
taping down tubes, which can be uncomfortable. The tape cannot be attached too close to the nipple because of sensitivity, and it can be difficult to adjust the tubes while holding a baby.

" Oftentimes these products cannot be used in public," she added. "It is for in-house use ... (mothers) are not comfortable using it in a public setting because of the messy, convoluted nature of it all."

Ewusi-Emmim collaborated with a lactation-specialist who provided insight

on development. She also reached out to the public and received strong feedback. "I surveyed 100 mothers, and they told me what they wanted to see in a new breastfeeding aid and what they do not appreciate in the current ones," she said. Talking to mothers has been a great guide in project development.

NipaYe's current prototype is designed to fix the issues through a focus on ease of use and comfort.



## Making Diagnoses Simpler

To diagnose patients with eosinophilic esophagitis (EoE), an inflammatory disease that disrupts the esophagus, current medical knowledge requires anesthesia and an endoscopy. This time-consuming and invasive process, combined with the low likelihood of a patient having EoE, leads doctors to sidestep testing for it.

However, professor **Christopher Gregg**'s lab at the University of Utah didn't think these difficulties should stop patients from getting easier, faster diagnostics. He founded **Etched DNA**, a startup focused on measuring RNA, rather than DNA, to streamline the process. The company is cutting out the need for an endoscopy altogether with a partnership with students at the Lasonde Entrepreneur Institute.

"Most personalized genomics companies analyze your DNA sequence," Gregg said. "But, throughout your life, you're going through all kinds of changes with your diet, sickness and stress, and your health fluctuates. Your DNA doesn't respond to physiological changes in

your body that tell you about your health. Our idea was instead to measure RNA. When RNA molecules are generated, they create a real-time measure of what's going on in your body. We wanted a simple way of getting RNA samples, and so we developed a way to do a swab of the mouth. We've learned a lot of new things about how that controls the expression of our genes, and we wanted to find a home for this new knowledge in the real world."

Gregg and the students in his lab wanted to find a way to translate the work they were doing in the lab to clinics and patients around the world. When applying for a small seed grant through the U's **Center for Medical Innovation**, the team was faced with creating a business model. That's when they first got involved with the **Lasonde New Venture Development Center** in 2017.

"It's incredible to be working with people from all kinds of backgrounds," said **Danny Powell**, a chemistry Ph.D. candidate and New Venture Development student in Etched DNA.



## Fighting Against Overdose

Utah continues to be among the top 20 states in the country that suffers from high levels of opioid overdose. While many are aware of this epidemic, there are few who act. But **Katie Barber** is not one to just stand by.

Barber, a health society and policy and communication student at the U, works with Utah Naloxone to put together thousands of kits to help battle drug overdose. She partnered with the **Bennion Center** to help train volunteers on spotting overdose and to open a dialogue about overdose, all while building these life-saving kits. She is especially passionate about connecting with community members one-on-one, especially those in athletics, as that demographic tends to be at higher risk than most.

"Giving volunteers the power to intervene to save lives — that's invaluable," Barber said.

Barber works with **Jennifer Plum, MD, MPH**, and **Jake Zimmerli**, who is graduating in August 2019 with his MBA, to make the "simple and huge impact in putting together a kit." Barber used to work as a pharmacy technician, but left, partly because she didn't like the growing opioid epidemic-related trends to which her work inevitably contributed. She began to surround herself with people who wanted to make a change and continues to stay motivated to improve because of these people — students and professionals alike.

Visit [utahnaloxone.org](http://utahnaloxone.org) to learn more.



# Video-Game Development

Students in the University of Utah's **Entertainment Arts Engineering (EAE)** program work tirelessly to produce games, art and designs they can use in portfolios and publish online. Making a game is not an easy task and usually cannot be done by just one person; students meet in teams so the work is spread out, and everyone can find something in the project to call their own. Students, both undergrad and grad, tackle all areas of computer science, tech art, level design and more in creating their games. Here are examples of games they are developing:



## Meaty McSkinBones

"Meaty McSkinBones" is a unique puzzle-platformer by EAE grad team Triplot that allows the player to take the role of three characters. The team wants to create fun, quirky gameplay so the player has an enjoyable experience.

The game begins when the main character, Froy, sees a newspaper ad for a device that can put him in three places at once. When things go wrong, he becomes Meaty McSkinbones and tries to put himself back in one

piece. The team's focus in the game has been art and collaboration. The game is supposed to be bright, happy, almost Disney-like in the feel of art and gameplay.

As the team progresses, they are focusing on teaching the player how to play the game and solve the puzzles. Through an iterative design process, the team begins with a level template to rough out each level, then builds the basic level in Unreal Game Engine. After the level is

built, they bring in testers from the EAE department for feedback on flow and puzzle readability. Making puzzle games is quite the process!

The team plans to release "Meaty McSkin-Bones" on Steam when they finish the game in April. Students at the University of Utah can also expect to find the game at EAE play day in April. The team is hoping to release the game on the Nintendo Switch.



## FPS Boiz

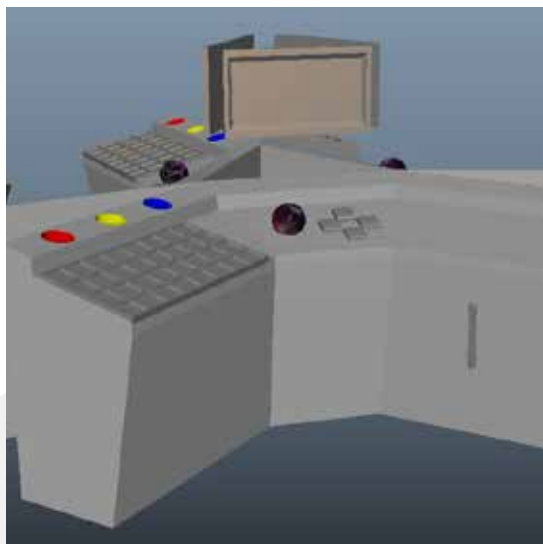
Started in May 2018 by **Christian Roy**, Da Bois is a team of 11 students working on making a first-person shooter in the Unreal Game Engine. Game engines are programs that provide resources and assets to build a game, so the team does not have to start from scratch.

"FPS Boiz" is meant to replicate other first-person shooters like Call of Duty 4, and pushes the

team's skills in networking, environmental art, design and more. "We want to further develop our skills beyond EAE into the game world," said environmental artist Brad Kloos. The team wants to move away from smaller, unique games to create a more AAA similar game, or a game that follows the design practices and mechanics of a larger company.

"FPS Boiz" has a

planned release in June 2019 with three game modes and four maps. The game is going to be available through the video game distribution platform Steam.



## Mechromancy

EAE team Tankazord's current project, "Mechromancy," allows players to share resources and interact with the game in a new, highly immersive experience. The team of 11 grad students are working on an alternate control game, where instead of typical computer hardware, the player has their own physical command center made for them to use specifically for playing. "Mechromancy" has required a focus on electrical engineering beyond typical game programming required for development.

The gameplay follows three players working together as drones to gather resources and survive in a hostile environment. Gameplay is through physical player interaction with hardware known as command centers, which currently feature six unique controls and interactions, such as a grid-based targeting system and a flight stick. As a three-player game, team members are required to interact in the physical world to trade resources in the virtual world.

The controls may seem hectic, and that is what

the team wants. As the game progresses into harder difficulties, players are required to move from more leading to more frantic game-play. The team is making the game for the 2020 Game Developer's Conference, which has a showcase on alternative control games. "Mechromancy" will have a playable build at the EAE play day in April and will also be available on Steam when released.



## Hyperborean Charter

Facing cold weather, debilitating hunger and a horde of bandits, players in Clockwork Forge Games' "Hyperborean Charter" must explore Canada's cold Klondike region and deliver a supply package to a research base before time runs out.

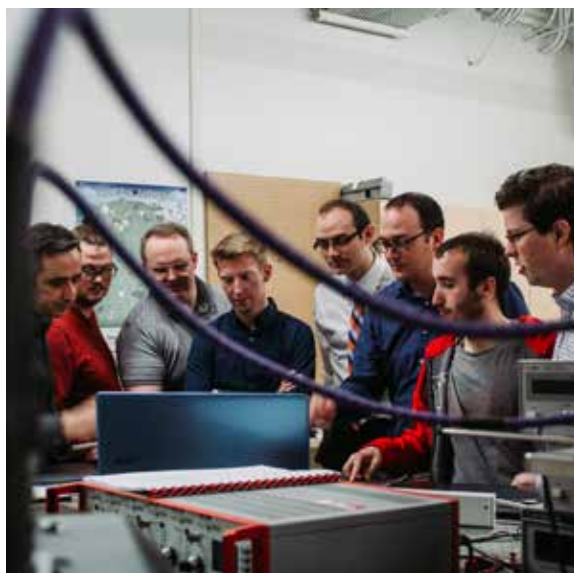
A major emphasis for the game was in its generative structure and interactions with other characters in the Klondike. The world is procedurally generated,

meaning that the map the player explores is built by guided randomness rather than constructed manually by the team. Throughout the world, the player can find villages where they learn about the landscape and trade for supplies. Random events can also pop up for a short time around the world, where players can gather resources, talk with other characters and learn the lore behind the game.

A primary focus in

developing the game was to gain experience in publishing and exploring team members' interests. Artists experimented with isometric view as the programmers tackled procedural generation, event spawning, and dialogue. "Hyperborean Charter" is available on Steam for download.





## High-Speed Data Transfer

**Eiger Peak** is a team of electrical engineering undergraduate seniors working to create a phase-lock loop for their senior project.

The team is composed of seven members – **Nicholas Bybee, Stuart Anderson, Jacob Atkinson, Reuben Morrell, Anthony Bailey, Mitch Crane** and **Anton Arriaga**, all working under the supervision of professor **Armin Tajalli**.

The team is learning the process of creating current mode logic amplifiers, which are used for transmitting data at very high speeds. A current mode logic amplifier is the basic building block for the phase-lock loop, which is used to control frequencies of transmitted waves. It is like racecars going around a racetrack, where signals are used to convey to the cars when they can pass each other and when to maintain a uniform speed and distance.

Their investigation into phase-lock loops requires specific design parameters such as power consumption, target specifications, fabrication technology and

circuit topology. With these in mind, the team is working to create a methodology to design optimal current mode logic amplifiers.

Efficiency is the current focus for the team, as they try to decrease the power demand of any chips they use in designing the phase-lock loop. Too large of a power demand will overheat the circuits and destroy important components, but too little power and data is sent too slowly. Increasing throughput is one possibility, which means finding ways to send more data at once.

The team hopes their research into phase-lock loops will find both national and international acclaim. From all the work the team put into their project, they hope the paper will make a mark on electrical engineering advances. "It has pushed a lot of our buttons," Anderson said. "It has challenged our learning curve, challenged our motivations. It is not textbook learning anymore; we are the ones making discoveries and understanding where this technology goes."



## Utah Student Robotics

Utah Student Robotics is building a robot for NASA's yearly robot mining competition. The team originated as a group of students in the mining department who wanted to try their luck in the competition. Now, the team is multi-disciplinary, with students from electrical engineering, computer science, mechanical engineering, mining engineering and more.

The team is working on a robot that can navigate the Mars landscape for the robotics competition. NASA rewards many aspects of robot design, such as how much the robot can mine, how much it weighs and robot autonomy.

The ability to work with the same tools NASA or Jet Propulsion Laboratory use is a great experience in real-world design. For instance, recent NASA ro-

bots have implemented the rocker-bogie system in their robots, so the team is looking to best implement that into their own design. The skills they develop in the team opens many opportunities in the future, especially if they are comfortable with the tools professionals in the field already use. "Everyone on the team would take a job if NASA offered it; NASA is the best of the best," said **Dave Purcell**, student president of club.

There is a wide range of engineering that goes into building the robot. To begin, the team designed a diagram to illustrate which parts interact with each other and where processing is handled. They also designed a scale prototype, a smaller, more basic version of the full robot, to see if the robot will work.



## Environmentally Friendly Refuge

The University of Utah campus and community puts environmental impact and sustainability in high importance. **Quaid Harding**, president of the U's Bee-keeping Association and an undergraduate studying biology, is working to further this goal through installing a pollinator demonstration garden on campus. The garden will tackle many key environmental and social issues on campus: reducing irrigation requirements, increasing biodiversity on campus and creating a quiet oasis for students, staff and community members.

The nearly 308-square-meter area will feature a bioswale to reduce flooding in buildings in that area of campus, various plants native to Utah that attract pollinators like bees and butterflies, an area to display artwork

from students at the U and a semi-circle wall with nesting boxes for cavity-nesting bees.

"My big goal was to create an area that was an oasis in which you could be distracted from the stress of school and classes," Harding said. "But, I also wanted to make an area that would be a habitat for bees. People are scared of bees, but they're so docile! I want students and the community to feel more comfortable around them and outside in general."

The team was awarded a SCIF grant of \$10,000 to kickstart the project, and expect another \$30,000 grant to fund the rest of the project. The garden will be located between the architecture, business and UMFA buildings, and should be completed in the next year.



## Hydroponic Gardening

**Dylan Wootton**, a senior biomedical engineering student at the University of Utah, is the project manager for the Hydroponic Team at Lassonde Studios. The team designs and builds hydroponic gardens inside the building, growing plants in nutrient rich water solutions. "We're able to grow plants faster and in a more sustainable manner than through traditional agricultural techniques," Wootton said. He finds working on the gardens to be calming as well as rewarding; he likes being able to see physical results of his hard work when the plants are grown.

When Wootton first heard about hydroponics, he saw it as an opportunity to bridge two of his interests: agriculture and technology. "I was born and raised inside an area where agriculture was very important to our community," he said. Working on the gardens has also helped him realize how beneficial knowledge of computer science will be in developing new technologies, and helped influence his decision to pursue a minor

in computer science and complete an emphasis in computing. After graduation, Wootton hopes to continue building new gardens and growing food, and possibly enter into a hydroponics consulting service.

In addition to Wootton's work with the hydroponic gardens, he also works as an RA (residential advisor) at Lassonde Studios. He decided to become an RA because of one he had his first year, who was successful in creating and facilitating a very close-knit community. Wootton wanted to be able to facilitate the same kind of close community for other residents. "Some of my best experiences in college have been the late-night talks that I have with residents about their majors, hobbies, or passions. It's quite rare to get access to such an eclectic group of people," he said. Being an RA has been an opportunity for Wootton to be involved in the community at Lassonde Studios, connecting him to people and resources that he otherwise likely would not have been exposed to.



# #10

## SATISFYING A HUNGER

### Thirst Drinks Now on Campus

An entrepreneur from an early age, University of Utah senior **Ethan Cisneros** has capitalized on yet another opportunity from his connections from being a student entrepreneur as he opens the third location of his business, **Thirst**, on the University of Utah campus.

Just over two years ago, Cisneros launched what has become a thriving drink and treats chain with three locations in the Salt Lake Valley, including locations inside the new Vivint Smart Home Arena and one in the heart of downtown Salt Lake City on 1300 South and State Street. Cisneros is pursuing a marketing degree from the **David Eccles School of Business**, where he has already finished

a certificate in entrepreneurship. He said, "Conceiving and running Thirst has been the ultimate field experience application of my education."

Since opening Thirst two years ago as a freshman at the university, Cisneros said it has been a "constant journey of hard work and dedication." Long hours and a mantra of "learning by doing" has allowed Cisneros to grow the company to a degree that has exceeded his expectations over the last two years as Thirst has established itself as a top stop for drinks and treats in the Salt Lake City area.

Visit the new campus location at the Crimson Corner at the Peterson Heritage Center (151 S Connor St.).







## Battling Food Insecurity

**Connor Keller**, a senior majoring in political science, noticed his peers struggling with food insecurity.

"I started to research the problem and found that it's very prevalent," Keller said. "Across the country, around 30-40 percent of students skip a meal once a week."

Those who are food insecure do not have reliable access to healthy, affordable food. According to Keller, it can lead to lower GPAs, deferred graduations and various health problems. In response to this growing issue, Keller surveyed University of Utah students to identify the impact of food insecurity on campus.

"The survey was very targeted, with a focus on first-generation and migrant students," he said. "Throughout our research, it was clear that no matter where it was in the country, there was always a huge discrepancy between how many first-generation students are food insecure versus the rest of the student population."

Keller's survey

confirmed this suspicion, finding that at the U, first-generation students were 13 percent more likely to be food insecure than non-first-generation students. With this information, Keller hopes to implement three solutions: expand the National Student Lunch program to universities nationwide, and incentivize the U to adopt the Campus Kitchen Project and Swipe Out Hunger.

The National Student Lunch program currently serves K-12 students by offering free lunch to children under the poverty line, but Keller thinks that students at universities receiving Pell Grants should also participate.

"At our school alone, such an expansion could immediately feed 6,974 students that are more likely to face food insecurity," he said. "It would be comparatively cheaper to implement at universities because cafeterias and staff are already at hand. The worth of Pell Grants has decreased substantially since the rise of college costs."



## Crepes with Culture

University of Utah students **Daniel Damiani** and **Felipe Perrotti** did not plan to make crepes when they first got the idea to start a food truck. Luckily, the idea of crepes took off and the U's Lassonde Entrepreneur Institute awarded them a Get Seeded grant and a place in the Company Launch program to enlighten Utah's taste buds.

Damiani, a business student, and his brother-in-law, Perrotti, a finance major, started with a simple idea: "We love cooking, we love eating," Damiani said. Italian by blood, these two called Brazil home before they came to Utah. You might say they are foodies. They grew up cooking with mothers and grandmothers, and these crepes, which are not French, were a common fixture at parties

and events.

In fact, they were so good, and Damiani and Perrotti missed them so much, they decided to make their own. This is more complicated than it sounds, as Damiani explained: "The equipment we have to use is not something you can find at a local store; we had to order online. Once we had it we started testing out different recipes. We had to like it before we could share it."

So what exactly are Brazilian crepes? The guys explained: "They are made in the form of a corn dog, but with a lighter batter and then stuffed with filling. You can put any type of filling: savory ham and cheese, bacon and cheese, even sweet filling like strawberry and banana with Nutella."



## From Court to Class in Vietnam

Though the opportunity to become a student-athlete is often taken for granted in the United States, less privileged countries' youth dream of this lifestyle — which is where **Santiago Sierra** stepped in. A recent kinesiology graduate from the U, Sierra was a member of the tennis team and is now partnered with **Coach for College**, a global service project that aims to inspire higher learning through athletics.

Sierra and other student-athletes on campus were familiar with different volunteer opportunities in Salt Lake City, but when he received an email from the U's athletic department about an opportunity in Vietnam, Sierra could not pass the project up. He soon was put into contact

with the director of operations of Coach for College, and after receiving partial scholarships from Coach for College, support from **Nona Richardson**, a senior associate athletics director, the U's athletic department and financing the rest himself, he was finally able to go to Vietnam.

Santiago and other student-athletes from all over the United States held a three week camp in small farming communities for seventh and eighth grade students. Though the language barrier was difficult at first, and the "basics," such as showers and internet, were lacking, Sierra feels that those difficulties were far outweighed by the deep connections and impact he felt he had made.



## Inspiring Makers across Campus

Being the chairman of the **Make Program** at the Lassonde Entrepreneur Institute looks great on a resume, but many other aspects of the role are even more rewarding.

**Christopher Holland**, a senior mechanical engineering student at the University of Utah and resident at Lassonde Studios, has been able to develop many professional and personal skills through his work in the Make Program, a space offered at Lassonde Studios where students have access to hundreds of thousands of dollars in tools and are able to collaborate on a wide variety of projects.

Holland has always loved building models and working with 3-D printers. He chose to attend the University of Utah specifically for the opportunity to live at Lassonde Studios and take advantage of the Make Program's resources.

His journey with the Make Program began with a position as a tool mentor before the Studios even opened. Within just

a month of becoming a tool mentor, Holland was promoted to the director of prototyping for the Lassonde Institute. Recently, he took over the Make Program as the chair.

Holland's involvement in the Make Program is helping him solidify career and professional goals. He aspires to be a Walt Disney Imagineer, focusing on both the technical and creative aspects of engineering and business. Although he has been interested in this career path for some time, he said the Make Program has helped him realize even more that it is what he wants to do.

"Lassonde keeps me very busy, and since I'm busy, I do better in school," Holland said, explaining how being involved at the Lassonde Institute has also helped him in his classes. In addition to being a place he can work on his own projects, the Make Program also supplies him with motivation to keep going, both in and out of class, developing engineering and life skills.



## Training Future Foster Parents

**Ryan Dickison, Clay Diffrient, Sophia Gakuma, Cheryl LaMar and Kyle Whittle** are students pursuing a master's of education in the instructional design and Education Technology Program. These students are working to update training materials for potential foster parents with **Utah Foster Care**. They learned that many prospective caregivers were not retaining information from existing training videos, which were mostly PowerPoint presentations paired with voiceover narration.

These students, who are completing their final capstone project, chose between several nonprofits, but they felt particularly compelled by the mission of Utah Foster Care. "We felt like kids (finding) par-

ents was a crucial need," LaMar explained.

During the fall semester, this team has worked to turn existing modules to more interactive content. Whittle said the material has shifted to "a focus on the child, and not necessarily the laws themselves." By using hypothetical scenarios and hands-on applications, these students are developing more informative, memorable and entertaining content.

Currently, the five students are refining the material and finishing scripts based on their already-completed prototype. By the end of the semester, they plan on having two or three modules ready to launch online.



## Education through Eye-Gaze Tech

**Cheri Blue** is a first-year Ph.D. student studying special education. Her research, drawing on nine years of experience working as a speech-language pathologist in public schools, focuses on augmentative and alternative communication.

Blue is researching the use of eye-gaze controlled communication systems. Eye-gaze devices use infrared trackers to detect eye movement, enabling users to make selections on a screen. Though eye-gaze systems are useful for people with limited motor functioning, Blue noticed a dearth of research on how to best teach and implement this technology.

Blue now leads a team that is teaching a student with severe motor impairment to use an eye-gaze device. She hopes this will expand his capacity

for expressive language, which is currently restricted to gesturing "yes" and "no" to a communication partner.

"It (also) has a lot of implications for control of his environment beyond communication," Blue said. Eye-gaze systems can be paired with smart home technology to allow for greater independence with tasks such as turning on the lights or changing a TV channel.

Blue believes further research and access to this technology could have far-reaching implications for people with motor impairments. In an educational setting, it could be used to teach math and literacy skills and foster more interactions between educators and peers. "For students with severe motor impairments, this could be a game changer," she said.





# GET INVOLVED

## Program Directory

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**ArtsBridge:** An interdisciplinary arts education outreach program.  
[artsbridge.utah.edu](https://artsbridge.utah.edu)

**ArtsForce:** A two-day conference for art students to learn about how to share their creative work.  
[artsforceutah.com](https://artsforceutah.com)

**Arts Entrepreneur:** Connect with your peers, learn the value of your skills and explore connections between the arts and entrepreneurship. [lassonde.utah.edu/art](https://lassonde.utah.edu/art)

**Bench-2-Bedside:** A competition for medical, engineering and business students to collaborate to develop or improve a medical device. [bit.ly/UUb2b](https://bit.ly/UUb2b)

**bioDesign:** Teams of engineering students work with clinicians to develop prototypes and test medical devices. [biodesign.utah.edu](https://biodesign.utah.edu)

**bioInnovate:** Graduate program providing a comprehensive biomedical, device-design training program. [bioinnovate.utah.edu](https://bioinnovate.utah.edu)

**bioWorld:** A two-semester course enabling students to develop a business plan for a medical-device in a developing country. [bioworld.utah.edu](https://bioworld.utah.edu)

**BlockU Program:** Take full advantage of your time at the U by enrolling in courses organized thematically to maximize your learning. [blocku.utah.edu](https://blocku.utah.edu)

**Business Scholars:** An experiential program for high-achieving students offered by the David Eccles School of Business. [eccles.utah.edu/scholars](https://eccles.utah.edu/scholars)

**Utah Center for Financial Services:** Help innovate financial services, guide regulatory issues, and examine and support the deployment of new financial products and services. [lassonde.utah.edu/ucfs](https://lassonde.utah.edu/ucfs)

**Center for Research on Migration and Refugee Integration:** Students connect as refugees, immigrants or volunteers. CRMRI encourages research, academics and outreach. [bit.ly/uucrmri](https://bit.ly/uucrmri)

**Company Launch:** Apply for dedicated space at Lassonde Studios through the Company Launch program. [lassonde.utah.edu/launch](https://lassonde.utah.edu/launch)

**Cowork:** Take advantage of the many opportunities and areas in Lassonde Studios to work together and collaborate. [lassonde.utah.edu/cowork](https://lassonde.utah.edu/cowork)

**Designbuildbluff:** A year-long program for graduate students in architecture who design and build homes in southern Utah. [designbuildbluff.org](https://designbuildbluff.org)

**Campus Founders Fund:** Apply for an investment from this unique fund or apply to be a student leader. [campusfounders.com](https://campusfounders.com)

**Entertainment Arts & Engineering:** Interdisciplinary program where students design and develop video games. [eae.utah.edu](https://eae.utah.edu)

**Food Entrepreneur:** Learn about food entrepreneurship, test your recipes in the Miller Cafe and more. [lassonde.utah.edu/food](https://lassonde.utah.edu/food)

**Foundry at the Lassonde Entrepreneur Institute:** An experience-based educational community where entrepreneurs can act on their business ideas and access resources. [lassonde.utah.edu/foundry](https://lassonde.utah.edu/foundry)

**The Gapp Lab:** A student game-development center for health-related video games and apps. [library.med.utah.edu/synapse/gapp](https://library.med.utah.edu/synapse/gapp)

**Get Seeded:** Pitch your business idea to your peers to receive seed funding for your venture. [lassonde.utah.edu/getseeded](https://lassonde.utah.edu/getseeded)

**Global Public Health:** Promotes health and medical development, leading to measurable improvements. [globalhealth.utah.edu](https://globalhealth.utah.edu)

**Global Health Scholars:** Students get exposed to a variety of perspectives on global-health practices. [bit.ly/globalscholars](https://bit.ly/globalscholars)

**High School Utah Entrepreneur Challenge:** A statewide business idea competition for all students ages 14-18. More than \$20,000 in prizes. [lassonde.utah.edu/hsuec](https://lassonde.utah.edu/hsuec)

**Hinckley Internship Programs:** Internship opportunities are available to students interested in politics. [hinckley.utah.edu](https://hinckley.utah.edu)

**Honors Praxis Labs:** Students work together to find original solutions to problems our society faces, while a faculty mentor guides the work of each group. [honors.utah.edu](https://honors.utah.edu)

**Hours with Experts:** Sign up to meet with an expert in fields including law, business, design and engineering. [lassonde.utah.edu/exporthours](https://lassonde.utah.edu/exporthours)

**International Exchange/Study Abroad:** Students participate in hundreds of programs all over the world based on their interests and career goals. [learningabroad.utah.edu](https://learningabroad.utah.edu)

**International Leadership Academy:**

Students examine global leadership in business, government and non-profit organizations. Community mentors assigned. Email: [lehman@poli-sci.utah.edu](mailto:lehman@poli-sci.utah.edu)

**Sorenson Impact Center:** Marshals capital for social good, empowers data-driven programs, breaks down silos across sectors and equips the next generation of leaders with social purpose. [sorensonimpact.com](http://sorensonimpact.com)

**Lassonde Entrepreneur Institute:** The hub for student entrepreneurs and innovators at the University of Utah. Many programs and opportunities open to all students. [lassonde.utah.edu](http://lassonde.utah.edu)

**Lassonde New Venture Development Center:** Graduate students are paired with a faculty inventor and spend a year preparing a business plan. [lassonde.utah.edu/new-venture-development](http://lassonde.utah.edu/new-venture-development)

**Lassonde Studios:** The home for student entrepreneurs and innovators. All students welcome to live, create and launch here. [lassonde.utah.edu/studios](http://lassonde.utah.edu/studios)

**Lassonde+X:** An introductory program for undergraduate students from all majors (X) to learn the entrepreneurial mindset, explore and practice entrepreneurship, and build skills to succeed in the future. [lassonde.utah.edu/x](http://lassonde.utah.edu/x)

**Legal Scholars:** Students interested in law school learn about current legal issues and how to prepare for law school. [bit.ly/legalscholars](http://bit.ly/legalscholars)

**Make Program:** Learn how to use prototyping tools and see your idea come to life at Lassonde Studios. [lassonde.utah.edu/make](http://lassonde.utah.edu/make)

**Meetups:** Join the Lassonde Institute at a meetup event to find teammates and learn about the community. [lassonde.utah.edu/meetups](http://lassonde.utah.edu/meetups)

**My U Signature Experience (MUSE):** A database of research, leadership, community engagement, scholarships and internship opportunities across campus. [muse.utah.edu](http://muse.utah.edu)

**Opportunity Quest:** A business-model executive summary competition for students across the state, addressing the executive-summary stage of business development. [lassonde.utah.edu/oq](http://lassonde.utah.edu/oq)

**RoboUtes:** Students interested in robotics participate in competitions. [roboutes.utah.edu](http://roboutes.utah.edu)

**SPARK:** An online community all about ideas — inspiring students to collect, sort and finally implement them. [spark.utah.edu](http://spark.utah.edu)

**Sustainability Scholars:** Students work across disciplines to research, imagine, create and implement strategies that will positively affect sustainability practices at the U. [bit.ly/sustainabilityscholars](http://bit.ly/sustainabilityscholars)

**Sustainable Campus Initiative Fund Program (SCIF):** Innovative and motivated students are awarded grants to team up with a faculty or staff member to bring about sustainable changes for the campus. [sustainability.utah.edu/scif](http://sustainability.utah.edu/scif)

**Undergraduate Research Opportunities Program (UROP):** Students are paired with faculty members and work closely with them in research experiences. [urop.utah.edu](http://urop.utah.edu)

**University Venture Fund:** Students work with entrepreneurs and investors to learn about investments and see how successful companies are managed. [uventurefund.com](http://uventurefund.com)

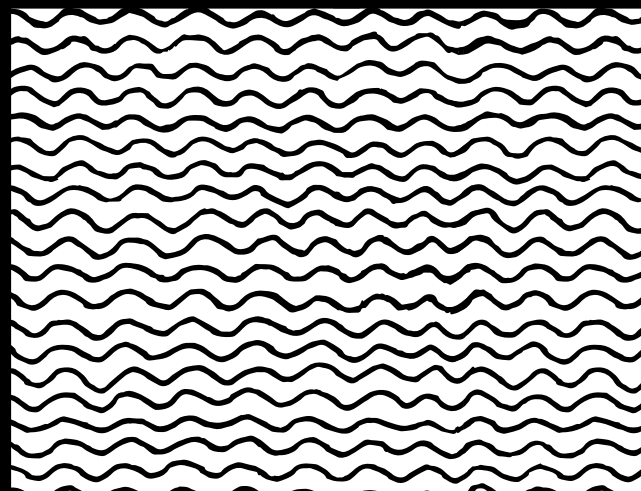
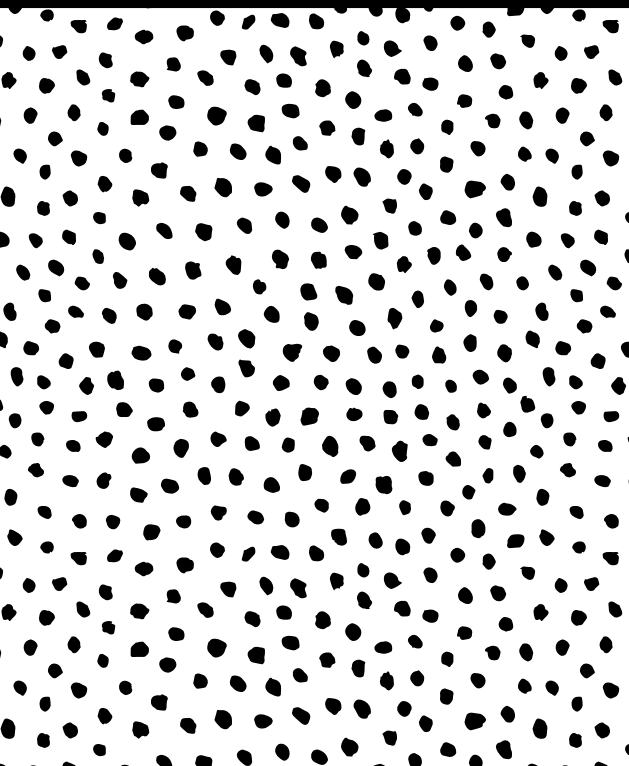
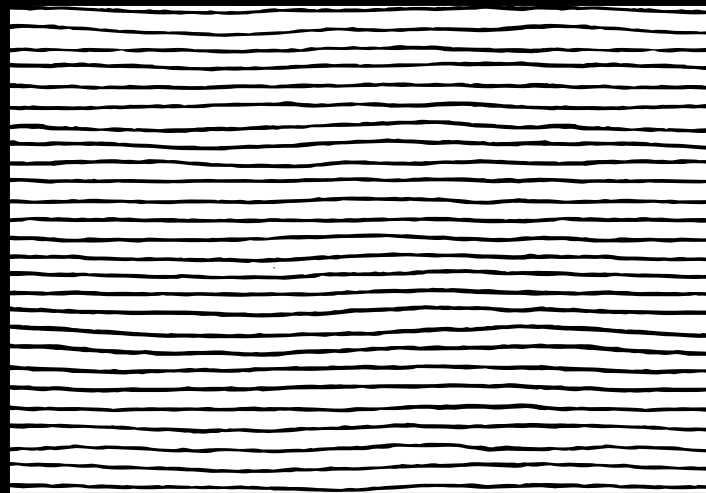
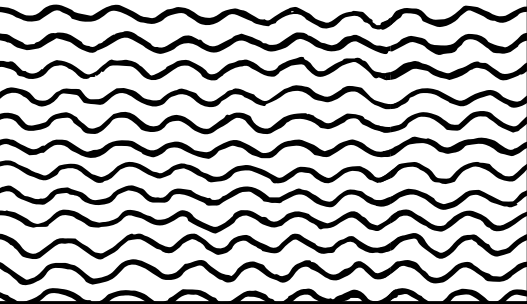
**Utah Entrepreneur Challenge:** One of the largest business-model competitions in the nation. Students across Utah develop full, comprehensive business models. \$40,000 grand prize. [lassonde.utah.edu/uec](http://lassonde.utah.edu/uec)

**Utah Real Estate Challenge:** Real-estate development competition for undergraduate and graduate students throughout Utah. [bit.ly/realestatechallenge](http://bit.ly/realestatechallenge)

**Workshops:** Attend regular workshops at the Lassonde Institute to learn new skills. [lassonde.utah.edu/workshops](http://lassonde.utah.edu/workshops)

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**Something Missing?** Do you want to add something to this list? We want to hear from you. Email us at [lassonde@utah.edu](mailto:lassonde@utah.edu).





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