Dear Reader,

The first time I visited Georgia State, I was surprised by how often the advisors and students I met mentioned research. As an incoming journalism major, I had little interest in the lab coats and test tubes I associated with research. I mostly tuned out those parts of my day and hoped I’d never be coerced into studying DNA strands.

Four years in, it’s surprising how much research has characterized my time at Georgia State, from working with new technologies on campus to studying new cultures in Italy and Vietnam. Even the creation of this zine required extensive YouTube tutorials.

Research is a necessary part of staying adept in a world that’s constantly evolving.

The stories in this zine reflect the dynamic culture of the Honors College, where students are actively engaging in cutting-edge research. These students represent a diversity of majors and have turned their interests into unique projects. They are the reason that, for two years now, Georgia State has been ranked number two in innovation by the U.S. News and World Report.

Everything in this zine from the writing to the artwork is made by Honors students. We want to give you an authentic look into our experience at Georgia State.

I hope these stories inspire you to explore your passions and to think of ways you can get involved on campus. You can never start too early.

Sincerely,

Noah Britton
Class of 2020 Journalism Major
Lexie’s interests are as interdisciplinary as her major, media entrepreneurship, which is part of a bachelor’s degree offered by Georgia State’s Creative Media Industries Institute (CMII). CMII, a creative space on campus led by industry professionals (Ludacris was our most recent artist-in-residence), offers students a chance to develop practical skills for a career in digital media.

“I think [Georgia State] did a really good job of recognizing the industries that are truly going to be the future of Atlanta,” Lexie said.

Inspired by her experience at CMII, Lexie presented research on the ability of universities to offer a creative space for students, “one that encourages learning through digital media and pushes this entrepreneurial spirit.”

“I think it’s the motivation to learn and constantly be learning, that’s kind of what has set my CMII classes apart,” Lexie said. “No one has the same background at all… So I was really intimidated to sign up for my immersive media classes, but that’s the good thing. It’s a really welcoming space. So I feel like you can know nothing, and that’s when you’re going to learn the most.”

Lexie gave us a tour of CMII, shown here by a design she made and 3D printed, and the opportunities available to Georgia State students on each floor.

Interview by Noah Britton
“This floor is our most technology heavy floor, especially for immersive media like augmented reality and virtual reality, as well as our motion capture studio. I have a friend, she does ballroom dancing, so they hooked up all the sensors and now she has a digital version of herself dancing. We have all of this amazing technology. I feel like a lot of times its ‘Look, but don’t touch,’ but here, you can actually use it.”

“The second floor of CMII is dedicated to ideation, prototyping, more of the business side of media. This is the floor that you would most likely find me on any given day. The nice thing about this space is that it is a collaboration between artists, creatives and business owners. It’s a good combo for developing a business. I’ve been pitching an AR concept for the past few weeks, and CMII has supported me in preparing for the pitch.”

“What I love about CMII that I haven’t really seen many people do is that they specifically rent out space to companies so they can have their offices here. So people that you could work for after graduation are literally across the hall. So CMII’s emphasis on industry collaboration is so true. In one room, every Friday, they host a seminar (last semester, the lecture series was focused on AI) with industry experts.”
“Groundbreaking” is one term used to describe Ausaf Ahmed’s research, and not just because the computer science major is a freshman at Georgia State. In his first semester of college, Ausaf is developing a new approach to underwater communication.

“Although I’m a freshman who has only been doing research for a few weeks, I’ve constantly been learning and I enjoy the process,” he said.

Through his university assistantship, Ausaf is working with Dr. Ashwin Ashok of the computer science department to create technology that would revolutionize underwater networking. “Some of the applications for such a technology include GPS-free underwater navigation, underwater sensing, water quality monitoring and underwater tracking,” Dr. Ashok said.

**THE PROBLEM**

Conventional underwater communication relies on radio waves. However, the conductivity of water means it absorbs these electromagnetic waves.

Most solutions to this problem feature acoustic communication, using sound waves to transmit data. Sound travels as longitudinal waves, which work well underwater, although at a much slower speed than radio waves, which travel at the speed of light.

“Enter light,” Ausaf said.

Like radio waves, visible light is an electromagnetic wave, but it’s not absorbed as easily in water. That makes light a viable option for fast communication, but only over short distances.

**THE SOLUTION**

Ausaf’s solution is to combine the two methods, leveraging the strengths of both sound and light to more effectively communicate underwater. He is currently testing ways to send data using both methods, especially in situations that require a layered approach.

“If an underwater robot needs to send a lot of data, but there are no optical receivers visible, it could potentially use sound to figure out which direction to turn in order to establish a link,” he said.
Raina Shahbuddin, a senior at Georgia State University, is the first student in the J. Mack Robinson College of Business to conduct research under the finance department.

She started her Honors thesis in April 2019 and will finish before graduating later in December. Her work focuses on understanding how potential investors such as venture capitalists evaluate startups. Raina was first exposed to this topic in a finance course.

“We had to do the present value of future cash flows, so we were valuing companies,” she said. “You have to figure out if I bought this company today, how much am I willing to pay for it? What is it worth today?”

Later in 2018, she interned at Cardlytics, an Atlanta-based company that helps advertisers strategically market their products on banking apps. While interning at this startup, she began to question valuation methodologies for new companies.

She remembers the Cardlytics chairman of the Board of Directors said he invested about $200,000 when the company first started. After the company initially opened shares to public investors, the chairman made $70 million in one day. Going public pressed the question, how did these investors know the company wouldn’t fail? With this in mind, Raina wanted to understand the strategies of a venture capitalist. “Venture capitalists throw a lot of money at a lot of companies, and they never know which one is going to succeed or which one is going to fail,” she said. “There has to be some kind of methodology or theory these venture capitalists follow.”

Raina reached out to Dr. David Beard, a lecturer for Georgia State’s finance department, to help her answer these questions. With Dr. Beard’s guidance and the resources available at Georgia State, Raina is looking to use her completed Honors thesis as the basis for graduate school applications.

After graduation, Raina hopes to pursue a master’s or doctoral degree in finance and study in a competitive program. This trailblazer is answering questions and prompting others to ask more questions. As the first finance major to do research at Georgia State, she also hopes to inspire other students to conduct research in their respective fields.
WE’RE STANDING IN THE BUILDING WHERE, LESS THAN A WEEK AGO, JENNY WAS SHAKING HANDS WITH FORMER PRESIDENT JIMMY CARTER.

After a competitive application process, Jenny secured a prestigious internship at The Carter Center in Atlanta, a nonprofit non-governmental organization founded by Jimmy and Rosalynn Carter. She is one of nine students from across the world working with the center’s Democracy Program, which promotes democratic policies through election observation and analysis.

The Carter Center is an expansive structure remarkably secluded from the noise of the city, the top of the Bank of America building just visible from the center’s Japanese garden (complete with waterfalls and geese). The building is meant to resemble Camp David in Maryland, its beige walls and dark wood paneling reminiscent of the era of Carter’s presidency. Jenny meets me in the lobby wearing a black turtleneck with a Georgia State pin on her suit jacket.

She leads me through a room full of elaborate gifts from different heads of state, then past a series of paintings by President Carter depicting his life in Plains. We stop at a display of original works by Maya Angelou, Yoko Ono and other prominent figures, and Jenny says things like, “You know President Carter is good friends with Bob Dylan, right?”
Framed by these tributes to pioneers before her, Jenny tells me about her arrival to the United States. She was six when her family immigrated from Vietnam, displaced by the Vietnam War. Within a year, she had learned English. In second grade, she won a writing competition. In third grade, she won a spelling bee, and by fourth grade, a poem she wrote was engraved on a plaque and placed outside The King Center in Atlanta.

Despite her efforts to adapt to a new culture, she felt “othered” by the cultural differences she carried.

“The first time I wanted to be something was in fifth grade... I wanted to be president of the United States. And my gifted teacher said, ‘You can’t be president of the United States because you were not born here. You’re an immigrant.’

“In my imaginative fifth grade head, this is my understanding of how you become a president... I was like, ‘Here’s my plan: I’ll be a lawyer and then a judge and then a congresswoman, and then I’ll change the Constitution so that I and all the other immigrants can be president of the United States.’"

Jenny’s research focuses on digital threats, an emerging program at The Carter Center that monitors and analyzes the media landscape and its political effects. Jenny exclusively researches this topic, which she attributes to experience she gained at Georgia State.

“Since they placed me where they thought my resume best fit,” she said.

Each week, she prepares summaries on global events, using a range of platforms from FACEBOOK to the New York Times to determine the consequences of online communication. This can include misinformation, disinformation, hate speech, propaganda and instances where social media sparked physical events.

She is also working on a series of projects for the program, developing methods for analyzing digital landscapes and gathering resources and data of media effects worldwide.

As part of her internship, Jenny attended a private Q&A with President Carter and his wife. They talked about “anything and everything, and that’s all I can tell you,” she smiled.

While her professional aspirations have evolved, they maintain the scope and determination of a 10-year-old Jenny. She plans to be among the leaders whose artifacts surround her every day at The Carter Center.

“Now, my end goal is actually to reform the way the world views immigrants and how they see themselves,” she said. “I want to work on a global scale, and I want to head the United Nations, maybe the UN High Commission for Refugees or the International Organization of Migration. I want to be in a position where I can make those global changes and essentially utilize my immigrant experience and reconceive that experience in order to uplift the global community.”

Photo: Jenny at age 4 in Vietnam. Photo provided by Jenny Pham.
I WEAR MAKEUP FOR ME
INTERPRETING AND INTERNALIZING FEMINIST MAKEUP NARRATIVES

BY SAVANNAH SETTER, HONORS THESIS CANDIDATE

Makeup is such a complex and contested part of so many people’s lives, including my own, that as an anthropologist it felt natural to begin looking deeper into the relationship people have with makeup.

Makeup is a double-edged sword in a lot of ways. On one hand, it’s a way to create art and be as inventive and expressive as you want, but on the other, it holds this long history of attributing women’s worth to their physical appearance and upholding unrealistic standards of beauty. I personally have worn makeup since I was a little girl, and I have worked in beauty stores for years and always noticed the complicated relationship people have with cosmetics. Now as a senior studying anthropology and sociology, I have the context and language to ask concrete research questions I’ve been asking myself for years.

My research looks to explore why women choose to wear makeup considering its history and nuanced intersections with femininity. I’m also emphasizing more recent trends in advertising that are attempting to rebrand makeup as a tool for women’s empowerment and liberation. Essentially, I am asking women how makeup narratives impact their relationship with cosmetics and whether or not their personal motivations in wearing makeup align with narratives in advertisements.

My research is being presented as my Honors thesis, which I am currently conducting with Dr. Faidra Papavasiliou in the anthropology department. As an Honors student all four years at Georgia State, I was constantly encouraged by my Honors advisor and the anthropology department to get research experience. Conducting an Honors thesis was an obvious path for me because it allowed me to be creative in my research project and made me more intentionally and independently engage with research.

Exploring makeup as a research topic was also hugely impacted by the anthropology and sociology departments. Both disciplines really encourage students to question their own personal habits and ideologies that often go overlooked, especially things that seem mundane like wearing makeup. For a makeup junkie like me, critically analyzing the beauty habits I developed through the context of articles, books, and documentaries from classes was my way of relating and really comprehending abstract theories and content from class.

Being able to actually conduct an ethnography has allowed me to practice skills I need for graduate school and my long-term career that I otherwise would’ve just read about in classes. This process has really allowed me to blossom as a creative, a researcher and an activist, bringing my passions and skills together in order to create something bigger and more impactful than just another class project.

DO WOMEN FEEL EMPOWERED WHEN THEY WEAR MAKEUP OR IS IT STILL AN OPPRESSIVE AND OBLIGATORY PRACTICE?
IS IT STILL AN OPPRESSIVE AND OBLIGATORY PRACTICE?
GOING GREEN.

Cane Creek Farm is a certified organic farm built on sustainable growing practices, meaning crops grow naturally without the introduction of any chemicals. It sits on four acres of land with small plots reserved for educational opportunities, community gardens and food pantry donations.

Connor McMillan spent the early hours of the summer working on the farm, trellising vegetables and digging plant beds in greenhouses before it was too hot to continue working. He had just returned from a year abroad studying political science in Lille, a city in northern France. He shares some stories.
about his extracurricular activities that year, which included weekends at famous bathhouses in Budapest and eating falafel in Marrakech.

“Europe was amazing, but there were still some things I missed about home,” Connor said. Lille lacked the green spaces that were readily available at his home in Georgia. It was a long walk to the nearest park, which he made frequently to escape the clamor of his foreign environment.

Connor’s thesis analyzes the effects of green spaces in urban environments, particularly on the social experiences of people living in cities.

“Urban environments today tend towards encouraging social isolation through design elements like high-rise apartments, concrete and asphalt infrastructure as well as stratified and hierarchical workplaces,” he said.

His thesis will focus on the relationship between green spaces and voter turnout.

Connor is working with software he used in his classes at Georgia State to analyze satellite images of polling sites and determine the amount of healthy vegetation in the surrounding area.

“I will look at voting data from the polling sites to see if there was an increase or decrease in voter turnout from one election to the next and if that change corresponds to a change in the amount of vegetation or green space,” he said.

As we circle the farm, Connor points out specific crops and explains their growth process in exact detail. He learned a lot on the job from the farm’s owner, Lynn Pugh, a retired high school science teacher who has already asked to read his thesis.

“Lynn is a great teacher. She showed me so much just about planting and the way that nature works and the way that things cycle... and I just learned a lot by doing and by experiencing it,” he said.

A political science major, Connor maintains an interdisciplinary approach to his research, which draws seamlessly from subjects like ecology and sociology. As we weave through tall plant beds, he easily pivots from a critique on fluorescent lights to a passionate survey of bean sprouts.

We finish the tour and I leave the farm feeling rejuvenated by the fresh air, or maybe how Connor described the effects of the fresh air.

STORY BY NOAH BRITTON
Slicing is the process of getting your model ready for the printers. That's going to help you make the specifications for the type of printer or the material that you're using. The time it takes to print depends on a lot of things that go back to slicing. Higher detailed, larger, dense prints are going to take longer to print.

“You can either design or download your model. There are many ways to design, but we only teach Tinkercad here in the lab, it’s like the most simple 3D design software. I always tell people, 'You can make anything you can imagine.'”

Export your finished design and print. In the EXLAB, we allow students, faculty and staff to queue up to the printers. When prints are done, people get notified through email, and they can come in with their Panthercard and pick up their print.”
RESEARCH OPPORTUNITIES

UNIVERSITY ASSISTANTSHIP

Honors College students may participate in the University Assistantship Program, where they are matched with a research department or professional office of interest and are mentored as they work on special projects.

HONORS THESIS

The honors thesis project provides an opportunity for students to delve into a topic or subject under the direction of a professor in their major department and demonstrate the results of their scholarship and research.

GSURC

The Georgia State Undergraduate Research Conference, also known as GSURC, is an annual showcase of student research and creative projects taking place across our campus. Winning presentations receive departmental recognition and cash awards.

INTERNSHIPS

Students can participate in approved internships for academic credit. Georgia State’s downtown location offers easy access to internships at the Capitol, CNN, and more.
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THANKS TO ALL THE #GSUHONORS
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