# Senior Projects 2022–2023

## BASIS WASHINGTON, D.C.



## SENIOR PROJECTS

At this point in their senior year, BASIS Charter School students have completed a set of four BASIS Capstone classes to earn their BASIS Honors Diploma. In addition, many students are in the process of completing the prestigious College Board's AP Capstone Diploma<sup>™</sup>, a challenging, two-year sequence of AP Seminar<sup>™</sup> and AP Research<sup>™</sup>, plus four other AP® Exams, all of which require extensive research, writing, and oral defense. The BASIS Diploma Senior Project marks the culmination of this hard work and perseverance.

Completed in the third trimester of a student's senior year, the Senior Project is unique, selfdesigned, and reflective of the students' varied academic interests and passions. Regardless of the discipline —business, art, humanities, science, engineering, social work, medicine, or law — each senior must develop and explore a research question. Creating an abstract that sets the tone of the research, participating seniors must submit a project proposal, and later, orally defend their methodologies.

Under the guidance of an external advisor who is a professional in their field, as well as a faculty advisor from their school, students dedicate 10–15 hours per week to the completion of their Senior Project. To document their journey, students post weekly blog entries about their experiences, successes, and challenges as they explore their guiding question. This journaling provides a unique viewpoint on the student activities and adds a reflective layer to their research process.

Throughout the development of the Senior Project, BASIS Charter Schools support their seniors every step of the way as they develop investigative skills and their own individual scholarly pursuits. The project summaries in this publication clearly illustrate each senior's ability to apply the knowledge, and intellectual curiosity they have acquired in the classroom to professional research methods and learning. At the successful conclusion of this project, students are eligible for a BASIS Diploma with High Honors, the most distinguished accolade offered by BASIS Charter Schools.

Each member of the BASIS Charter Schools network commends our seniors for their dedication, and motivation, not only for completing this Senior Project, but for their commitment to the BASIS Charter School Curriculum. Congratulations to them on this powerful achievement, and our best wishes as they move forward on their educational journey.

MEatra

Carolyn McGarvey Chief Executive Officer BASIS Ed AZ+

Patti Bezanson Chief Executive Officer BASIS Ed Texas



#### JENIN A.



### ROOTED IN THE LAND: THE IDEOLOGICAL IMPACT OF RECENT POPULATION PATTERNS IN THE DESERT SOUTHWEST

**SUMMARY:** Known as the setting of romantic stories of lonely cowboys and perilous adventures, the desert landscape of the Southwest has been a classic and quintessential representation of American ideals since the beginning of the 20th century. However, its reputation as an endless and largely untouched wilderness has also put the region on the frontlines of urban, suburban, and industrial development and expansion—causing immense population growth that has been accelerating at record rates over the past several decades. The rampant impact of this population growth stretches beyond environmental sustainability to the various systems of thought belonging to the region, which have had to adapt to the encroachment on the physical landscape in which they are rooted. In my internship at the Population Reference Bureau, I utilized U.S. Census Bureau data in Excel and ArcGIS Pro, a mapping software, to directly observe demographic trends in my region of focus. Furthermore, I explored the complex ideological discourse of the region regarding growth and progress, politics and activism, and human-land relations—all of which were prevalent themes in the prominent Southwestern literature I read. What I have gleaned from this project is that the physical landscape and human expression are intricately interwoven, linked by an increasingly rare sense of place, but in a way that is becoming more diluted, as seen in the urban, suburban, and rural development of the Southwest.

• BASIS ADVISOR: Evan Burt • ON-SITE MENTOR: Sara Srygley, Diana Elliot • LOCATION: The Population Reference Bureau

#### DIYA B.



### LIVED, COMMUNITY-BASED CIVICS EDUCATION: THE IMPACT OF AN EDUCATED DEMOCRACY

**SUMMARY:** Civics is defined as "a social science dealing with the rights and duties of citizens," according to the Merriam-Webster Dictionary. Within its broad definition, it is referenced as a term for government involvement and political education. While prior studies exhaustively agree about the benefits of civic education initiatives, there is still an absence of accessibility for these programs. We can partially attribute this to the information that is promoted as a result of these research initiatives: statistics. While there is great importance of statistics when it comes to funding and outreach, this focus fails to recognize the benefits that grow beyond numerical data. It is absolutely necessary to expand this research and change how we view the impact of civics education. This project aimed to combat this disconnect between statistics and reality, and to share a unique, youth-and educator-focused account of civic engagement solutions. To do so, I worked with the DC State Board of Education, Civic Suds, and YMCA's Youth & Government to organize a city-wide conference, host a pride prom for community development, and share resources to connect students with our local government in order to promote nonpartisan civics education. To compile this information and experience, I collected audio diaries, interviews, and firsthand accounts of these events into a podcast entitled "Make Some Space." Through this project, my hope has been to amplify the voices of people impacted by civics education and continue to advocate for its importance.

• BASIS ADVISOR: Rachel McCarthy • ON-SITE MENTOR: Allister Chang • LOCATION: District of Columbia State Board of Education

#### SAMUEL B.





SUMMARY: The advent of digital music and streaming services like Spotify, Apple Music, and Amazon has shaken the music community to its core. The balance of the core relationships between listener, artist, and distributor effectively flipped on its head. Today, there is a new status quo, where the listeners and streaming platforms seemingly hold all the power. Yet this shifting balance has disadvantaged musicians, especially in terms of revenue distribution. This project aimed to develop a more transparent view of the modern music industry, with a specific focus on the impact of streaming platforms on musicians. My research sought to find the impact that the proliferation of streaming services has had for musicians as well as how revenue streams have changed and how that has affected musicians. I worked with The Intercept, a news organization that specializes in investigative journalism, who helped me arrange interviews, write the scripts, and record the final product. My product is a podcast that has the goal of presenting to musicians how music has changed in the past two decades and how others have made successful careers in the streaming era.

#### • BASIS ADVISOR: Colin Read • ON-SITE MENTOR: Ryan Grim • LOCATION: The Intercept

#### ANINA D.



#### FOOD INSECURITY: AN IN-DEPTH LOOK AT THE TRIALS AND TRIBULATIONS AFFECTING THE SOLUTIONS TO COMBAT THE ISSUE WORLDWIDE

SUMMARY: Food is a necessity for life. It gives us the nutrients to work and play. Historically, humanity has struggled to find food, thus resorting in competition for resources among people. Food insecurity is a crisis. There are many contributing factors that are larger than the issue itself—for example, changing world economies and conflicts, most recently the Russo-Ukrainian War and COVID 19. This project is both significant and timely for those struggling with food insecurity, as well as those who want to help solve it. My research has sought to find solutions to combat worldwide food insecurity, and I have learned about a myriad of options available for alleviating the issue in the present time. I hope to educate others on the issue so they can be part of the solution. For my internship, I worked with Bread for the World, a Christian advocacy organization urging U.S. policymakers to strive for a world without hunger. I was the project manager for a Hill event to brief Congress members and staff on food insecurity hot spots around the world. In preparation for that event, I wrote articles highlighting those places and created engaging and dynamic infographics and tools to educate policymakers on the work Bread for the World is doing. My research included reading, researching, and meeting with professionals at events to learn more about the issue and the work that is being done, with the goal of understanding and developing the best package of solutions for the people struggling with food insecurity.

• BASIS ADVISOR: Fatima Mrabet • ON-SITE MENTOR: Jordan Teague, Abiola Afolayan • LOCATION: Bread for the World

#### **BENJAMIN D.**



### MARINE ANIMALS WITH ARMS: WHO CAN BEST SURVIVE IN SHIFTING OCEAN CLIMATES?

SUMMARY: Climate change contributes heavily to increased temperatures across all ecosystems, including vulnerable oceans. This creates stressed environments for corals, and thus the foundation of our richest ecosystems is threatened, forcing symbionts to adapt accordingly. It is now vital to gauge what our coral reef communities will face in the years to come, as well as how biodiversity will change over time. This can be achieved with Autonomous Reef Monitoring Structures (ARMS), stacks of hard plastic plates that provide homes for invertebrate animals, which are placed in benthic sites and then recovered later. We can get a glimpse of possible future oceans by looking at reefs around Oman, where pH, salinity, and temperatures can reside at extremes rarely seen in reef systems. This work is significant to our understanding of reef invertebrates, which constitute around 92% of marine life. We need to know which organisms dominate resources in order to take appropriate protective action. Using high-resolution imaging, I examined ARMS that were recovered from Oman's reefs in February. My goal was to investigate the diversity of marine communities in these conditions and to gain crucial insight into the composition of reefs near Oman. Using photos and an Al learning engine called CoralNet, I quantitatively compared functional groups (usually phyla and classes) found between sites, allowing me to statistically represent the diversity of each area around Oman. The frequency of certain groups showed the fittest individuals, and the number of groups gave an understanding of the overall diversity and thus, health, of the areas.

BASIS ADVISOR: Dr. Terry Villarreal • ON-SITE MENTOR: Dr. Christopher Meyer, Sarah Tweedt
LOCATION: Smithsonian National Museum of Natural History, Department of Invertebrate Zoology

#### NYA G.

### BOYS WILL BE BOYS: THE DETRIMENTAL EFFECTS OF TOXIC MASCULINITY ON BLACK MALES

**SUMMARY:** Toxic masculinity is a prevalent issue throughout our society. Although it affects every male in some way, I believe that it has been highly detrimental in the Black community. Growing up, I witnessed many Black men struggle to express themselves without feeling as though they were less than a man. I have witnessed the same thing happening to my peers. Trauma affects everyone. Yet many people do not understand the effects of trauma on Black people. I started out by researching the evolution of toxic masculinity in the Black community in the United States. The point of this research was to bring a different perspective to this line of study. During this project, I conducted my research through my internship alongside my supervisor, Simone Sawyer, at the Center for Health and Health Care in Schools. As I worked with clinicians, professors, Ph.D. students, and so many others on how we can effectively improve mental health in schools, my project shifted to focus on the toxic masculinity presented in younger boys and how schools around DC can effectively support young Black boys. We talked about improving families' and youths' voices in mental health policymaking in order to ensure that new programs reflect the real issues students face. I continued to connect the generational trauma of Black men to the detrimental effects of toxic masculinity in youth. Through this research, I hope to educate people and myself on the detrimental effects of toxic masculinity in the Black community.

BASIS ADVISOR: Garrett Dome • ON-SITE MENTOR: Simone Sawyer
LOCATION: The Center for Health and Health Care in Schools



#### DANIKA H.



#### DEVELOPING A LEGACY: THE SURVIVAL OF FILM PHOTOGRAPHY IN A DIGITAL WORLD

SUMMARY: Like most technology, photography has become predominantly digital in the recent century. No longer is it a luxury to take a family photo or have a yearly portrait done; photography is now available to most people in their back pocket on any modern phone. But even as digital technology dominates the world, film photography has survived the transition. The process of developing film has remained almost the same since its initial invention in the 19th century, despite the ever-changing technology in digital photo-making. Through my research, I investigated the early life and uses of film photography, the initial decline of film photography due to the invention of digital photography, the artists that kept film photography alive, and the reasons for the increase in film usage within the past decade. During my internship at the Capitol Hill Arts Workshop (CHAW), I compared the differences and benefits of both digital and film photography and interviewed fellow film photographers about what components they value in their art that possibly cannot be achieved in digital photography. My final product includes a written paper recounting my historical findings on the progression of film and digital photography throughout the years and a gallery of my photographs, both film and digital, comparing the quality and composition of each medium and drawing conclusions on the advantages of each. My research explores the story behind how film photography has maintained such a significant presence in art and restates the importance of recognizing the historical techniques that have paved the way for modern technology.

BASIS ADVISOR: Holly Draper • ON-SITE MENTOR: Brian Washington, Stephanie Morse
LOCATION: Capitol Hill Arts Workshop (CHAW)

#### IAN H.

### THE POWERHOUSE AND THE CELL: USING COMPUTERS TO MODEL CELL MEMBRANE PROTEINS

**SUMMARY:** Researching microscopic cellular processes can be quite difficult, as most methods tend to only work in specific situations. However, as computers have become more powerful over the past 30 years, computational modeling has become a viable alternative, and can be especially useful for more complex biological situations. This technology has impacted many areas of biology and is commonly used in cutting-edge research, so informing people about how this technology works and its limitations is increasingly important. I worked at the Johnson lab, a theoretical biophysics lab at Johns Hopkins University which uses computer modeling to research different aspects of cellular biology. Their main research topic is clathrin-mediated endocytosis, a process used to import important materials into the cell, though they have many fields of focus. In the lab, I mainly focused on fixing and documenting a Python library that could create graphs and other "human-friendly" visualizations from their computer modeling to biological research despite its being a simplified description of real life processes. With this research, I created a video that explains to a general audience the strengths and weaknesses of modeling, so that they will have the necessary context to understand future developments that come from it.

BASIS ADVISOR: Dr. Nathaniel Green • ON-SITE MENTOR: Dr. Margaret Johnson
LOCATION: Johns Hopkins University Computational Biology Lab

#### NATHANIEL H.



#### WHAT'S STOPPING THEM? A HISTORY OF INCLUSIVITY REGARDING INTELLECTUAL DISABILITIES

SUMMARY: We are all taught to respect differences in a person's gender, race, or sexuality. There should be no difference in the respect we give someone who lives with a disability. Education and the well-being of children has remained a top priority in lawmaking. However, children whose disabilities prevent them from learning at what is considered a sufficient pace face considerable challenges. Although European physicians in the 19th century made advancements in understanding intellectual disabilities in adolescents, a majority of Americans viewed people with disabilities as second-class citizens. The primary effect of this negative view was children as young as four being institutionalized in mental hospitals well into the 20th century, with the turning point being the Civil Rights and the Disability Rights movements of the 1960s. Following these movements, progressive legislation has been the key catalyst in the path to a brighter future. With the Rehabilitation Act instituting 504 plans and the Americans with Disabilities Act providing greater protections and rights, 21st century America has become a more ideal learning environment for all children. I wished to investigate this further with the FDR Memorial Legacy Committee, which specializes in disabled rights advocacy. In my time with the organization, I researched historical changes, developed an understanding of present-day issues, such as COVID-19, that disabled children face in the classroom, and evaluated potential roadblocks for the future. The past and present of the American education system are riddled with flaws and failures of entire minority communities. I hope this project educates us all about flaws and common errors that are still made in special education.

BASIS ADVISOR: Luke Terranova • ON-SITE MENTOR: Mary Dolan
LOCATION: FDR Memorial Legacy Committee



#### ALEXANDER L.

#### **BUILDING A COUNTRY: HOW TO MERGE SECURITY FORCES IN SOMALIA**

**SUMMARY:** Somalia has had a short yet complex history. Currently, the Federal Government of Somalia attempts to establish national order amongst various clans and local militias, aiding them in their fight against the extremist group al-Shabaab. I used my research project to delve into the country and develop ideas regarding the new government. The question I answered was this: How should local and federal security forces in Somalia interact in the creation of an effective national government? In the pursuit of an answer, I interned at a non-profit named Bancroft Global Development. This organization, headquartered in DC with a presence in three continents, works in Somalia and other states to deliver solutions to the complex economic, environmental, and societal harm caused by war. In my role, I read and wrote reports on Somalia, participated in and assisted with meetings, and undertook a long-term research project analyzing the effectiveness of Somali combatants in relation to their background. I also did work outside of Bancroft. I used historical examples and political science to provide a framework for my proposal, addressed complex political dynamics through Somali history, and stayed up-to-date with developments in the country. Ultimately, this project helped me better understand and learn more about the complex situation in the country. I am excited to present my ideas in the form of a final paper and presentation and contribute to the discussion surrounding the state of Somalia.

• **BASIS ADVISOR:** Dr. Terry Villarreal • **ON-SITE MENTOR**: Greg Joachim • **LOCATION**: Bancroft Global Development

#### MALIN M.



#### READING BETWEEN THE LINES: HOW MODERNIST POETS LEFT THEIR MARK

SUMMARY: Modernism was the greatest art movement of the 19th century, spanning every artistic discipline and transforming the identity of our current society. Modernist poetry, naturally, tracked the era's developments, both large and small, through various shifts in language, topic, and style. Thus, asking why each style of Modernist poetry transformed into the next and how it did so leads to a unique lens through which to view this history. What led to the changes between these poetry movements? When did each leading poet decide it was time to break away from their previous art style, and why? How did this new art form spread? For this project, I asked these questions and more to learn how sub-movements within Modernism began and were changed due to influences from other movements, ideas from friends and peers, and concurrent world events. This brought research which has already been done on Modernist poetry together under a single, broader historical focus. During my internship at the Smithsonian's Dibner Library of the History of Science and Technology, I learned how old texts, manuscripts, and diaries are accessed and used for research. This experience gave me the tools necessary to study American history using rare texts, which was a great help in searching for Modernist poetry and the personal texts of its poets. Through this research, I hope to spread what I learned about the historical influences on Modernist poetry movements in a way that is accessible to people of all interest levels, so that my audience can more greatly appreciate Modernist poetry and the history which influenced it.

• **BASIS ADVISOR**: Dr. Nathaniel Green • **ON-SITE MENTOR**: Lilla Vekerdy • **LOCATION**: Dibner LIbrary of the History of Science and Technology

#### CLAIRE P.

#### SCULPTING THE FUTURE: HOW MODERN-DAY POTTERY IS INFLUENCED BY TRADITIONAL CHINESE TECHNIQUE

**SUMMARY:** Over 15,000 years ago, early humans developed their first pots to store and cook food. What started as mere necessity has become one of the greatest (and most useful) art forms. The plates, bowls, and cups that now line your tables and cabinets are a product of thousands of years of development. Like most forms of art, pottery's past techniques and concepts influence its future. Therefore, it is essential to understand the evolution of old practices to current art forms. Because pottery history originates in ancient China, I explored Chinese techniques to understand better how these techniques were brought into modern ceramics. Through my internship at Hinckley Pottery, I improved my throwing skills and learned how to keep the studio running. I also came in contact with experienced potters who shared their stories with me and helped me become a better potter. Outside of my work with Hinckley, I read books on ancient Chinese and modern-day pottery and drew connections between techniques used in each. I took this research into my final product, a gallery book in which I curate works past and present that illustrate the evolution of pottery, featuring my own pots that highlight key concepts I learned throughout my time at Hinckley Pottery.

• BASIS ADVISOR: Holly Draper • ON-SITE MENTOR: Karna Robinson • LOCATION: Hinkley Pottery



#### ANSEL P.



#### CATCHING STARDUST: INVESTIGATING THE EFFECTS, COLLECTION, AND USE OF EXOTIC PARTICLES AROUND NEUTRON STARS

**SUMMARY:** Neutron stars are a well-researched class of object, composed of the densest known substance in the universe, and emitting large amounts of energy in the form of electromagnetic radiation and magnetic fields. Around them, many high-energy particles compose their corona, exposed to and oftentimes ejecting into outer space. Some aspects of the surroundings of neutron stars have been researched, but many connections remain undiscovered and the question of how this interacts with future interstellar travel is open. This project investigated unexplored potentials for the space surrounding neutron stars using the latest findings in particle physics, determined the feasibility and practicality of collection and use of these particles in the future, and related the findings in a research paper. Aside from filling in gaps in our understanding of neutron stars, this project added a new set of considerations for future research into interstellar travel planning. To complete this project, I worked with Ruby for Good, a coding organization that develops tools for free use in the Ruby programming language. The use of code greatly helped with checking models against data and ensuring that my conclusions were consistent and reasonable. Neutron stars have the potential to be perfect fueling and stopping points due to their unique coronas and magnetic fields, and with changes to current designs, passing through their coronas may be accomplished successfully.

• BASIS ADVISOR: Bob Montcalm • ON-SITE MENTOR: Polly Schandorf • LOCATION: Ruby for Good

#### ERIK P.

#### AN INSIGHT INTO AMERICAN ENERGY POLICY AND POSSIBLE SOLUTIONS

**SUMMARY:** With climate change seemingly reaching new extremes every day, it is no doubt that humans' unsustainable energy-producing practices are an integral part of the problem. Therefore, it is no surprise that the clean energy movement has been gaining more and more traction, with solar, wind, and even fusion energy becoming popular among activists and scientists alike. How does this relate to policy? Although science makes these energy infrastructures possible, Congress enacts bills that make them a reality. My main research goal was to show that energy policy plays an equal role as science develops, and our future energy goals will be deeply impacted by how the U.S. decides to pursue them. I wrote a research paper on this topic and developed a guide for the general public that would address questions regarding the different options for clean energy, and reasons that Congress may prefer one method over another. I pursued this at The Kauffman Group, a political consultancy company that works with senators involved in passing energy policy. My roles included staffing numerous events for Congressional members, as well as collecting and analyzing congressional reports, and donor data. Using what I have learned in the field of political legislation, and after conducting research on the correlation between the government and energy, I included in my paper topics such as economic factors, international and internal political conflicts, and technological aspects that must be taken into account when constructing energy policies.

• BASIS ADVISOR: Kevin Gilbert • ON-SITE MENTOR: Kim Kauffman • LOCATION: The Kauffman Group

#### EME Q.



#### ON THE OUTSIDE LOOKING IN: THE SPACE BETWEEN CIVILIAN, MEDIA, AND MASS GENOCIDE

**SUMMARY:** In the wake of mass media globalizing our world, significant events, specifically mass atrocities, tend to fall victim to brief trends in the eyes of those on the outside. In 2021, pleas to "Save the Uyghurs" covered almost every social platform, yet less than a year later, that blaze of public action quickly burnt out. So what does genocide mitigation look like beyond the scope of a media post? To what extent does civilian action play a role in preventing and mitigating genocide? And, how can social media successfully engage civil society in pushing for policies that protect targeted people? In my research, I explored the various aspects of foreign response during past and present genocides to better understand how external populations can provide such aid. I interned at the United States Holocaust Memorial Museum, assisting with their youth program and retraining as a museum tour guide. Access to research conducted by the museum's Simon Skjodt Center for the Prevention of Genocide provided me with a plethora of fundamental information in conducting my research. Ultimately, my goal was to come up with a list of things that people can do to aid foreign populations who are experiencing genocide. I explain what makes these actions more successful than others, with references to genocides such as the Holocaust, the Armenian Genocide, Rwandan Genocide, and more. Through my Senior Project, I have continued my journey of educating myself and those around me as I delve into the roles of civilian action in preventing and mitigating genocide.

• **BASIS ADVISOR**: Luke Terranova • **ON-SITE MENTOR**: Jamil Miller • **LOCATION**: United States Memorial Holocaust Museum





### AN EXAMINATION OF NURSING STUDENTS' RESILIENCE DURING THE COVID-19 PANDEMIC

**SUMMARY:** Nurses play a vital role in the operation of hospitals and healthcare facilities. Part of providing support to nurses is making resources available for student nurses and emphasizing the importance of mental wellness as an integral part of resiliency building. With the changing curriculum of nursing school during the COVID-19 pandemic and the existing potential stressors of nursing school, it is important that nursing students are equipped with resources to navigate their academic careers and beyond, leading to the question: What are strategies that nursing students can implement in their lives to foster mental wellness? To investigate more into the resilience of nursing students, I reviewed existing research on nursing student resilience and coping strategies to create an educational pamphlet. The intention of this project was to understand the potential stressors nursing students experience and create an educational guide for them that includes strategies for mental wellness. I interned at The Catholic University of America's Conway School of Nursing to support my research on this topic. Through this placement, I was able to learn about human subjects research processes through social and behavioral research training modules, gain support with secondary research, and connect to researchers working on the topic of nursing student resiliency. With the information from my in-depth literature review, I created an educational pamphlet that suggests potential strategies for resilience building in nursing students.

BASIS ADVISOR: Dr. Terry Villarreal 
ON-SITE MENTOR: Kimberly Walsh
LOCATION: The Catholic University of America, Conway School of Nursing

#### SIYAN T.



#### ERITREA'S TOTALITARIAN GOVERNMENT: HAS THE UNITED NATIONS DONE ENOUGH?

SUMMARY: The United Nations (UN) is an international organization that serves as the premier peacekeeping global entity. Under its Charter, the UN has designated powers to uphold such responsibility. Since its independence, Eritrea has been governed by a dictatorship: the Afwerki regime. Numerous human rights violations have been committed without substantial consequences. Examples include torture, illegal imprisonment, and more, with some occurring against citizens of other nations on Eritrean soil. In my research, I evaluated the extent to which the UN has exercised its powers in intervening in developing nations' crises, using Eritrea as the project's subject. By using the Libyan instance of UN interventionism as a point of comparison, I displayed the documented efforts taken by the UN to address issues similar to those in Eritrea today. This project's goal was to contextualize the large Eritrean diasporic population and find potential avenues to mitigate the abuses caused by the Afwerki regime. Linterned with JMG Productions, Inc., where I helped compile headlines and other journalistic pieces for an anti-bullying documentary that they are developing. Through my experience with JMG, I learned how to conduct journalistic research, how to vet sources for credibility, and how to analyze the connection between seemingly unrelated bodies of work in order to create a cohesive narrative. The research that I conducted over the past few months helped me tremendously in understanding the role that global peacekeeping organizations play in mitigating disputes and human rights violations in developing countries.

• BASIS ADVISOR: Steven Johnson • ON-SITE MENTOR: Joelle Goode • LOCATION: JMG Productions, Inc.

### JACKSON W.

### A DEEP DIVE INTO DC SPORTS IN-GAME ENTERTAINMENT

**SUMMARY:** Sports have always been an action-packed and exciting experience. Even in the 1960s, when the technology to entertain fans was not the same as it is today, they still hosted thrilling events for fans. Games like Wilt Chamberlain's 100-point basketball game and the Stanley Cup Final games in hockey are what drove fans to these sporting events. However, as time passed, the ways that teams bring in fans has changed. Now they rely a lot more on different types of entertainment beyond just the game. In my research, I explored the most impactful changes in DC sports history that lead to the entertainment experience we have today. I worked with Monumental Sports to see first hand how entertainment is used in the modern game. I conducted interviews with producers, examining the thought process behind their method of entertainment. Through my internship and research, I learned the process behind how sports organizations create the exciting and electrifying atmosphere inside the stadium as well as the major events that paved the way for the modern sport experience.

#### • BASIS ADVISOR: Colin Read • ON-SITE MENTOR: Aimee Brillhart • LOCATION: Monumental Sports



#### LISA Z.



### UNDERSTANDING RESILIENCE: A CASE STUDY OF AN INDEPENDENT BEAUTY BUSINESS AFTER THE COVID-19 PANDEMIC

SUMMARY: Businesses are continuously developing strategies to accommodate the events happening in the world. In particular, the COVID-19 pandemic accentuated changes in consumer behavior such as the frequency of purchasing items online and an increased emphasis on self-care. However, with these new shifts to digital platforms and general competition with larger beauty firms, new vulnerabilities of local beauty businesses were made more apparent: They lacked the powerful tools that dominant beauty companies had for navigating the changes that were occurring. Thus, this project was designed to understand how certain independent beauty businesses were able to build resilience in face of operational difficulties. To study this topic, I worked at Take Care Shop, an independent green beauty business in the Georgetown DC area, and explored the strategies that they used throughout the entire era of the pandemic. They are a spa, skincare, and beauty shop, which I referred to as a case study for my research. During my internship, I assisted in identifying and executing business growth strategies that addressed competition in the green beauty business. With social media being a key communication outlet, much of the research that I did was directed toward this area of marketing. I played an observational and active role inside the shop, and tailored my research goals toward assessing which business strategies helped local green beauty businesses rebound from a period of both fierce competition and economic instability. The final assessment can prove useful in building stronger foundations for business strategies.

• BASIS ADVISOR: Fatima Mrabet • ON-SITE MENTOR: Becky Waddell • LOCATION: Take Care Shop DC



The teachers, administrators, staff, and executive leadership of the BASIS Charter Schools network commend all of our seniors for their perseverance in their research, and for their hard work throughout their **BASIS** Charter School journey. We give our most heartfelt congratulations to them for their achievements thus far, and these projects are only the beginning!



410 8th Street NW | Washington, DC 20004

