

Jessic Lee (She/her/hers)

Preferred Name: Jessie
Date of Birth: 02/22/2002
Applicant type: Undergraduate student
Application date: 02/05/2024

Contact Information

Preferred Name: Jessie
Email 1: Jessic.lee001@stu.bmcc.cuny.edu
Email 2: jessiclee4778@gmail.com
Current Address: 401 W 130st 219B , New York, NY 10027, USA
Permanent Address: 1941 65st 2B , Brooklyn , NY 11204, USA
Cell Phone: +13479027279
Ok To Send Text Message? Yes

Demographic Information

Race: Asian, Native Hawaiian or Other Pacific Islander
Ethnicity: Hispanic or Latino
Sex Assigned at Birth: Female
Gender Identity: I do not wish to provide this information
Veteran Status: Non-Veteran
Received Pell Grant: Yes
Disability:
Seeing: None
Hearing: None
Walking: None
Lifting: None
Concentrating, remembering, or making decisions: None

Family Information

Parent or Guardian 1: Female
Highest degree: Less than high school completed
Occupation: Other, Business Owner
Parent or Guardian 2: Male
Highest degree: Less than high school completed
Occupation: I do not know

Current Enrollment

Enrolled in post-secondary degree? Yes
Institution: CUNY Borough of Manhattan Community College
Location: New York, NY
Carnegie Basic Classification: Associate's Colleges: High Transfer-High Traditional
College Level: At least 2 but less than 4 years
College Control: Public, 2-year
Historically Black College and University: No
Hispanic Serving Institution: Yes
Minority Serving Institution: Yes
Tribal College: No
Predominantly White College: No
Status: Full-time
Degree: Associate's degree (e.g., AA, AS)

Primary Major: Information services and systems
Expected Degree Completion: 05/22/2024
Expected Class Standing, Fall: Sophomore
College GPA: 3.94
GPA Scale: 4.0
How are you financing your degree(s)?
Financial assistance from parents, spouse, other relatives, not to be repaid: No
Financial assistance from your employer: No
Financial assistance from the Veterans Educational Assistance Act: No
Loans from parents or other relatives, to be repaid: No

Education

High School: Brooklyn Technical High School **School District:**
Location: Brooklyn, NY 11217

Experience

Prior Research Experience

Prior research experience: Yes
Prior research experiences funded by NSF: I do not know
NSF program(s) participated in:
REU
LSAMP
International research experience: No
List all prior research experiences: Summer Engineering for Community College Students at Cornell University Material Science and Computer Science Field with an Initiative to develop a Web- based tool for high energy diffraction experiment planning

Work Experience

Currently working as a teacher or professor? No

Test Scores

SAT

Not Available

ACT

Not Available

GRE

Not Available

Program Awareness

How did you hear about the NSF program?
This website or other NSF website
Other, I indulge in topics of science on social media

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Loans from the school you attended, banks, federal or state government: Yes

Tuition waivers, fellowships, grants, scholarships: Yes

Assistantships or work study: Yes

Earnings from employment: Yes

Personal savings: Yes

Other, please specify:

Additional Questions

1. Describe the areas of research in the marine geosciences that interest you most, your personal goals for this internship, and indicate your preference for working in office, lab, or field settings. (200-300 words)

The marine organisms of the ocean and their ability to adapt to the changes in the environment alongside the relationships built among the sea community is what I find the most captivating. The alliance of Alpheid shrimps and the Gobies is a prime instance of this phenomenon. The Goby fish's sharp eyesight enables easy detection of potential threats while the Alpheid shrimp's burrowing expertise offers a secure home for both species. The Goby alerts the shrimp with chemical cues to stay inside the burrow when danger is near, while the shrimp provides a safe home for the Goby. This symbiotic relationship is endearing and inspirational. This interaction provides an instance of a healthy relationship. The teamwork between these two species enables both to another day of survival in the ocean. This interaction provides an instance of a healthy relationship. The teamwork between these two species enables both to another day of survival in the ocean. Alliances such as these propel my curiosity about marine geoscience.

As a student researcher studying the field of computer systems, I am excited by the prospects of fieldwork in the field of marine geosciences. Through this summer research internship, I would like to learn how to collect reliable data to utilize existing software to draw hypotheses and conclusions from the data collected. At my current institution the Borough of Manhattan Community College, from working on a research project focused on leveraging artificial intelligence and crowdsourcing to further the development of assistive technologies, I learned the importance of collecting data to improve research designs. Due to the nature of my personal goals as an aspiring researcher, I prefer to gain experience in the field and lab.

2. Write about what your career goals are and how participating in this REU program will help you meet these goals. (200-300 words)

My career goal is to use technology to create positive changes in the world. To achieve this, I believe it's essential to gain a better understanding of our planet and its oceans. My fascination with the ocean and its organisms has driven me to explore new technologies that can gather data and answers about the issues affecting biological species. I am acutely aware of the relationship between the sea and the organisms on land, and I believe that this knowledge can help us create a more sustainable future. I am particularly interested in how technology can be used to solve problems like overfishing and the use of fish populations in medical research. Through this REU program, I hope to enhance my research skills and become a more proficient student. I believe that the program's focus on marine biology and technology will help me gain the knowledge and expertise I need to pursue my career goals. In the future, I aspire to pursue graduate studies in technology and marine biology. I am confident that my participation in this REU program will provide me with a solid foundation to build upon as I strive to use technology to create a better world for all.

3. What unique qualities and characteristics will you bring to our program? (you can also add an explanation to what might appear to be gaps or weaknesses in other parts of your application. Feel free to explain your side so these gaps or weaknesses do not detract from your strengths.) (300-400 words)

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Through my twenty-one years of living, what I find most satisfying is the pleasure of a great conversation, not ones surrounding gossip, but the ones surrounding science, technology, and business. Recently, when I stumbled across a TikTok on social media notifying me of the scientific discovery that Amelia Earhart's plane had been found, I was obligated to learn more. Through some research, I discovered that using sonar technology, researchers had located the first woman aviation pioneer to fly solo across the Atlantic Ocean. Interested in the findings that sonar technology provided, I stumbled upon the technology company whose equipment aided in this discovery. Excited about this news, I notified my friends of this scientific discovery. Such conversations revolving around science fulfill an exploratory part of myself much like the symbiotic relationship between the Alpheid shrimp and goby fish.

4. This REU program is dedicated to enhancing the diversity of future scientific communities and sharing our science with a broader audience. Please describe how you, based on your personal background and life experiences (including social, cultural, familial, educational, or other opportunities or challenges) will contribute to this mission during and after participation in this REU. (200-300 words)

Based on my personal background and life experiences, I believe the mission of enhancing diversity in future scientific communities and sharing science with a broader audience during and after my participation in this REU program aligns with my personal goals. As a first-generation woman of color pursuing an education in a male dominated field, I understand the importance of community and have taken leadership roles in organizations such as the Women in Cybersecurity chapter and founded the Women in STEM club at my school to foster a sense of community among women in STEM disciplines. Through these experiences, I have gained an interdisciplinary approach to problem-solving and hold trust in the power of collaboration across scientific disciplines. In addition, my interest in technology and marine organisms aligns with the objectives of this REU program. I am excited to learn about the various methods and potentials of technology to improve health of the oceans in the United States and across the globe. I am confident that my diverse perspectives and experiences will allow me to contribute to the program's goals and bring a unique perspective to the program. After participating in this REU, I plan to share my experiences with my community and promote the importance of diversity in STEM disciplines to inspire future generations of students.

5. REU Mentor #1 Name: Please review the mentors and projects list (<https://csumb.edu/reu/mentors-and-projects/>) and consider who you are most interested in working with as your first choice (REU Mentor #1). Please list the first and last name of REU Mentor #1 here.

Dr. Fiorenza Micheli

6. REU Mentor #1 Explanation: Please explain why you chose REU Mentor #1. (50-100 words)

Dr. Micheli research revolving Kelp Forests & Coral Reefs Aim #3 fulfills my fascination with marine organisms. Sharks are amongst one of my favorite mobile predators. As a Jaws movie fanatic, I am ecstatic to indulge in research about sustainable management to ensure that these mobile predators preserve the ocean's food web and ensure marine life thrives.

7. REU Mentor #2 Name: Please review the mentors and projects list (<https://csumb.edu/reu/mentors-and-projects/>) and consider who you are most interested in working with as your second choice (REU Mentor #2). Please list the first and last name of REU Mentor #2 here.

Dr. Liz Alters

8. REU Mentor #2 Explanation: Please explain why you chose REU Mentor #2. (50-100 words)

Dr. Alter's research topic concerning rockfish intrigues me immensely as like humans, this marine organism has no clear obstacles to preventing them from migrating. This fact interests me in learning more about the differences between the sisters and brothers of this species and how their place of living impacts quantitative phenotype

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characters.

9. REU Mentor #3 Name: Please review the mentors and projects list (<https://csumb.edu/reu/mentors-and-projects/>) and consider who you are most interested in working with as your third choice (REU Mentor #3). Please list the first and last name of REU Mentor #3 here.

Dr. Guilio DeLeo

10. REU Mentor #3 Explanation: Please explain why you chose REU Mentor #3. (50-100 words)

Dr. Deleo's research resonates particularly with my studies as a student studying technology. His work surrounding the use of mathematics models to understand how fishes react to the everchanging environment aligns seamlessly with my goal to understand the world through technology and environment.

References

Reference 1

Reference Writer Name: Dr. Mohammad Azhar
Position: Computer Information Systems Professor
Institution: Borough of Manhattan Community College
Phone: +12122201477
Email: mazhar@bmcc.cuny.edu
Status: WITHDRAWN

Reference Submitted Date: 02/07/2024

Reference 2

Reference Writer Name: Evan Siegel
Position: Computer Information Systems Professor
Institution: Borough of Manhattan Community College
Phone: +12122201335
Email: mathdoctorsiegel@gmail.com
Status: REQUESTED

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JESSIE
LEE

347-902-7279

jessic.lee001@stu.bmcc.cuny.edu New York, NY

PROJECTS

Summer Engineering Internship

Developed web based tool for diffraction experiment planning, using *Python, Javascript, HTML, and CSS* **Digital Portfolio**
Utilized *Visual Studio Code* to develop personal website showcasing technical knowledge **Web-based Games**
Developing arcade style games utilizing *HTML, Javascript, and CSS*

WORK EXPERIENCE

After School Group Leader

Manhattan Youth September 2023- December 2023

Collaborate with Activity Specialist to establish cohesive environment
Prepare students for recreational activities
Ensure safety protocols
Foster environment to promote creative thinking, verbal communication Assist Activity Specialist with core curriculum (ex: coding)

SKILLS

C++ : Intermediate
Coursework
Java: Executing basic concepts
Python: Intermediate
Web Development: HTML, CSS, Javascript
Github: Utilize github to launch web pages

EDUCATION

Summer Research Assistant

Cornell University June 2023- August 2023

Develop plan to launch in-situ high energy diffraction planning tool
online Identify and compile lists of potential research subjects in accordance with study objectives Code and verify data in accordance with specified research protocol and coding procedures, enter data into computer database for subsequent analysis
Prepare comprehensive reports summarizing research findings.
Attend Science Conference and Symposium

Research Assistant

Borough of Manhattan Community College February 2023- December 2023

Borough of Manhattan Community College

Associate of Science Degree Computer Information Systems 2022 -

Current GPA: 3.8

Manage logistics, participant recruitment, and ensured ethical research practices. Foster engagement and communication within the

Gilman Scholar LSAMP Scholar

Plymouth Medical

PTK Honor Society
Dean's List

President of the Women in STEM club Vice President of Women in Cybersecurity Chapter

ASA College

Assemble tourniquets, needles, blood collection and sterile kits for Platelet

Prevention Intern

Assault

Phlebotomy Program
March 2022-June 2022

New York Alliance against Sexual

February 2020- June 2021

project's volunteer community. Generate ideas for incentives to enhance user engagement.

Biologic Clinical Laboratory Technican

February 2022- August 2022

Rich Plasma therapy treatments

Utilize centrifugal procedure to execute a minimally invasive non surgical treatment to relieve pain

Partner with health professionals and those involved with patient care as a product expert to tailor solutions for patient therapy

Insure a clean and sterile area of work and instruments

Utilize patient focused clinical dialogue to engage with each member of the office/hospital at the right level

L A N G U A G E S

English

Cantonese

Mandarin

Facilitated different strategies to raise awareness about current issues regarding different types of violence

Managed multiple projects to strengthen the understanding of ways stay safe and be aware of signs of distress.

Directed different presentations to implement different strategies to be proactive when faced with adversity and different types of violence

Cultivated a safe environment for self and team to discuss different perspectives leading to a more cohesive understanding of self and others.