#### Isabelle Villarreal

# 1702 Westport Crescent, Newport News, VA 23602 (757) 814-3970 | Isajholie@hotmail.com

#### **Education**

# Longwood University, Farmville, VA

May 2023

Bachelor of Science in Biology, Concentration in Pre-Med Minors: Chemistry and Criminology & Criminal Justice

GPA: 3.92/4.00

## **WORK EXPERIENCE**

Aux Delices | Server | Newport News, VA

May-July 2022

- Prepared and served customers in a timely fashion while multitasking in a fast-paced environment
- Managed stock and ensured inventory was updated daily

# Substitute Teacher | Newport News, VA

October 2023-Current

- Worked with ages K-12, adapted to meet the unique demands of each classroom and solved issues quickly as they arose
- Maintained a welcoming environment that promoted learning and growth by communicating efficiently with both students and staff

## RESEARCH AND LAB EXPERIENCE

Student Research Assistant, Longwood University, Department of Biology January 2022-May 2023

Metagenomic Fingerprinting of Rainwater Harvesting Systems and Microbial Analysis

- Developed and implemented plans of using metagenomics as a means of detecting bacteria in water collection systems; conducted bacteria analysis using developed methods
- Assessed pathogenic bacteria present in samples, looking for *Legionella* specifically
- Used PCR to amplify the bacteria DNA in systems and gel electrophoresis to validate presence of DNA
- Tested two methods of qPCR, Taqman and Dye-based method to assess for quality and quantity of results using an *E.coli* model
- Employed qPCR methods with *Legionella* with the purpose of differentiating between *Legionella* pneumophila and *L.spp*
- Quantified Legionella pneumonia to assess public health risks in Rainwater Collection Systems

#### **ACADEMIC ACHIEVEMENTS**

Dean's List, Longwood University
President's List, Longwood University
Varsity Women's Soccer
Honor's College
LIFE STEM
All Semesters
All Semesters

## **CERTIFICATIONS AND SKILLS**

- Lab skills include: Micropipetting, PCR, serial dilutions, purifying and prepping DNA
- NREMT: EMT-B (B202304774) Expires: 12/31/2027
- BLS Provider Expires: 08/25