I have always had a passion for protecting our environment and gaining experience in field work. I am eager to utilize my interdisciplinary research skills in both biological and environmental sides.

My research experience in ecology began in academic laboratories. In courses such as Environmental, Health, and Sustainability Sciences, Ecology, and Ecosystem Ecology. In my E, H, and S laboratory, I collaborated on a project addressing lead contamination, mobilization, and accumulation in urban soil-plant interactions. This project focused on understanding how lead concentration changes between different areas of a plant-soil system, and how lead contamination could possibly affect plant health in urban farms. By going out into the field, collecting and processing soil samples, and handling machinery such as an XRF Spectrometer, I started to gain useful knowledge in laboratory techniques and fieldwork. Our findings indicated high levels of lead in urban farm soils, and a decreased amount of lead in the stem and an increased amount in the rhizospheric soil.

During the summer after my sophomore year, I was accepted into the Biller Lab through the Wellesley Science Center Summer Research Program, which allowed me to work full-time, create and execute an independent research project, and present my findings. I designed and executed an experiment researching the interactive effects of vesicle-enclosed viral DNA in Prochlorococcus bacteria. By looking at viral infection of bacteria through the unconventional pathway of vesicle mobilization, this experience sparked an interest in creating my own research projects and methodology. Afterwards, I wanted to further explore ecological research, but this time apply it to a new field, and use a system dynamics approach.

As a result, I reached out to the MIT Climate and Sustainability Consortium (MCSC) to work on a project focused on understanding the influences of various elements in soil, using a systems dynamics approach towards understanding soil ecosystem relationships. In this project, I created holistic visual frameworks and Mulder's charts. In addition, I coded hypergraphs to display element and mineral similarities. I was also able to present this project to the MCSC, and answer questions from faculty and students. After this experience, I became very interested in how the content of soil can tell us interesting things about environmental factors and processes. For this reason, I reached out to the Bergmann Lab at MIT and began working on Project Mississipian. The focus of this project was to analyze the content of soil cores from the Mississippian geologic period to understand historical ecological and environmental changes. As a student researcher, I utilized microscopy to analyze and stitch high-resolution images of petrographic thin sections, as well as conduct fossil and grain analysis. Working in this lab helped fostered my passion for researching environmental impacts in unconventional ways.

Time management and flexibility were essential skills throughout my undergraduate career. I successfully completed a double major, while concurrently working in the Environmental Health and Safety Office on campus, and conducting research at the MCSC. As a result, I have developed a strong work ethic, and an ability to multitask and approach issues from a multifaceted perspective. Furthermore, leadership and communication skills have been incredibly important throughout my research journey. Within my capstone environmental studies

course, I also served as a Project Team Manager. In this project, I coordinated with other students to create an ecosystem service assessment of the Wellesley College campus, and present our findings at the 2024 annual Ruhlman Conference.

After graduation, I worked as a post-baccalaureate research assistant for the MCSC. I continued working on a project focusing on the logistics of Carbon Capture and Storage (CCS) in the global industry, which I had begun during my undergraduate career. I analyzed the sources and impact of funding, partnerships, and technology in CCS deployment, as well as categorized and compared various CCS deployment initiatives, with an emphasis on identifying the most impactful logistical factors and how they may enable the success of global initiatives. I also utilized ArcGIS to perform spatial-economic analysis in order to optimize CCS hub and pipeline formation. Afterwards, I presented my findings to faculty and the MCSC community in order to promote widespread CCS industrial adoption. Additionally, I worked with the Dr. Cesar Terrer lab on a project in which I reviewed academic literature to determine the effect of land use change on terrestrial mammal and bird biodiversity. Within this project, I compiled and analyzed large, primary biodiversity monitoring datasets to evaluate target species abundance, occurrence, and presence-absence data.

Currently, I am working as a quail research technician at the East Foundation. In this position we are working on a project to research how varying factors such as climate or human interactions such as hunting can affect quail populations. I conduct both ground call and helicopter surveys, in order to quantify quail abundances in different areas of southern Texas. I identify quail, and conduct trapping, banding, collaring, and radio telemetry procedures in order to collect biological and spatial data. Furthermore, I utilize GPS field maps to navigate and conduct field research in remote areas, and operate 4WD and UTVs. In this position, I also conduct research on mammals and plants. I have conducted white-tailed deer capture surveys, in which my team captured, marked, and released deer, after collecting tissue samples and other biological data. Additionally, I have also conducted vegetation research in which I identified, collected, dried, and measured plants in randomized quadrat sampling in order to see how grazing affects local plant populations.

As a master's student at Evergreen, I aim to investigate how climate change influences population dynamics, habitat suitability, and species interactions in endangered species. By integrating field surveys, camera trapping, telemetry, and remote sensing, I am interested in quantifying ecological responses to shifting climate regimes in order to inform ecosystem conservation strategies. Through my graduate research, I hope to explore population dynamics, habitat suitability, and species interactions. As a result, I hope my future research can create more climate adaptive methods for wildlife conservation.