



Summer Internships 2025

HSPV



Amanda (Ani) Barnette

This summer I worked alongside José Hernandez at the Architectural Conservation Laboratory (ACL) at the University of Pennsylvania. I worked on a multitude of different collections projects like the Historic Building Materials Collection, analysis for the Sands and Aggregates Library, and cataloging the Walker Zanger Natural Stone Library. I used techniques I learned from Conservation Science, Digital Media, and archival and research techniques from Documentation I.

Each collection is in a different stage than the other. This allowed for a variety of collection analysis over the course of my internship. The Historic Building Materials Collection (HBMC) is an expansive collection of historic material that is from multiple historic buildings and sites from all over the world. I spent time brushing up on my knowledge in programs like Excel, Photoshop, and InDesign for this collection. I spent time cataloging and photographing the samples from our expansive collection to further upload them to the HBMC section of the ACL website. A similar project was the Walker Zanger Natural Stone Library located in the basement of the Center for Architectural Conservation. I was continuing the work of José Hernandez and recent HSPV graduate Siqi Zhao in cataloging and organizing the stones by giving them their own identification number using the program Access. José and I also catalogued and have gone through the various literature sources that came with the collection. The sources are now located in the office in the ACL for further research into the types of stones in the collection. The Sands and Aggregates Collection is a collection of a

hundred samples of sands that are from multiple sites the Center of Architectural Conservation has worked on as well as sample reference sets. I selected nine samples to begin sieve analysis to assess particle size distribution for each sample selected. Each sample washed, filtered, dried, and sieved with a mechanical sieve to ensure proper sieve techniques. Each sample got a photoshoot under the Leica Microscope for each sieve and the bulk sample. This will later be on the Sand and Aggregate Collection's website where you can search each sample by particle size and particle distribution.

I met a multitude of different professionals that used the laboratory facilities like Roy Ingraffia, the DUMO Lab Research team, and the team from the Baltimore Community Brick Factory Project. While taking my breaks on campus, I also met one of the many UPenn squirrels that stole my snacks on break. Overall, I am looking forward to using my experience in the lab to further my education this upcoming school year and further into my career.



Image 1: The samples given to the ACL by the Baltimore Community Brick Project for compression analysis.



Image 2: My first HBMC sample recorded; HBMC ID: ST.US-TX. XXXX. FACS.01

UPenn Architectural Conservation Laboratory
Philadelphia, Pennsylvania
ACL Summer Collections & Research Assistant

Dienabou Barry

This summer, I had the opportunity of working with The Lower Merion Conservancy (LMC) as an intern, where my primary responsibility was to write and submit Determination of Eligibility (DOE) forms for five historically Black churches in Lower Merion Township. These churches are: Zion Baptist Church of Ardmore, Mount Calvary Baptist Church, Saints Memorial Baptist Church, Bethel African Methodist Episcopal Church of Ardmore, and Bethel African Methodist Episcopal Church of Bryn Mawr. Each of these churches has played a foundational and enduring role in the development of the Black community in Lower Merion Township. Their leadership and congregations not only worked to ensure the prosperity of Black residents and businesses but also responded to broader national challenges such as the Great Migration, the Great Depression, and the Civil Rights Movement. A major focus of my work was exploring how Black residents and businesses navigated these historical moments, with the churches serving as vital anchors in the community.

Under the supervision of Kathleen Abplanalp, LMC's Director of Historic Preservation, I conducted research on each of the churches, including analyzing historic newspaper articles that detailed the architectural, cultural, and social history of the churches. Beyond the archives, some of the most meaningful parts of the internship came from my site visits, where I connected directly with pastors, reverends, archivists, congregants, and community members of Lower Merion. These conversations were invaluable, not only for the insight they provided into the churches' histories, but also for the generosity and warmth with which people shared their stories. This made the work feel deeply collaborative, and it gave me a much fuller appreciation of how central these churches have been to community life. This was an interfaith experience for me that was eye-opening and enriching. It allowed me to see more broadly how Black churches function within communities.

My supervisor and I met weekly to review progress, and I found those meetings very supportive. Together, we worked to complete and submit each DOE through the Pennsylvania Historical and Museum Commission's online platform, PASHare. Knowing that the ultimate goal of this work was to ensure the recognition and preservation of the churches' historical and cultural significance made the process even more meaningful. I was also able to bring my coursework from my first year in

the historic preservation program directly into this internship. Documentation, Research, and Recording (HSPV 6000) was very helpful, as the experience of working with the Philadelphia Historical Commission's Historic Building Nomination Form prepared me for the structure and requirements of the DOE. Likewise, Public History: Theory and Practice (HSPV 5340) sharpened my ability to think critically during site visits. That course guided me in what kinds of questions to ask and which details to observe during site visits. My work as a research assistant also came into play because of the newspaper-based urban renewal research that was done, which closely paralleled the archival research I conducted for this project. This internship truly allowed me to sharpen and expand my skills as a preservationist. I became more confident in conducting archival research, particularly through analyzing historic newspapers and integrating those findings into the DOE forms. I also improved on my architectural documentation by drafting site plans for each church. My writing and organizational skills developed as I worked to translate complex histories into clear, comprehensive DOE submissions. Most importantly, I strengthened my ability to communicate with community members and incorporate multiple perspectives into preservation work. These improvements not only made the internship fulfilling but also prepared me to approach future projects with greater skill, care and confidence.



Image 1: A photograph of the Mount Calvary Baptist Church Congregation during the early 20th century. Image Source: Mount Calvary Church Archives

Image 2: Zion Baptist Church from an 1899 article from The Philadelphia Inquirer. Image Source: ProQuest Historical Newspapers

The Lower Merion Conservancy
Lower Merion Township
Lower Merion Conservancy Summer Internship

Fatima Caceres Arar

During the summer of 2025, I worked as a Preservation Intern at Beyer Blinder Belle Architects and Planners in New York City. The firm works on preservation, adaptive reuse, and contemporary intervention projects that often extend beyond individual buildings, forming part of larger urban-scale master plans. As part of the preservation studio, I had the opportunity to take part in both research and design tasks that supported a variety of ongoing projects. I worked on multiple projects at the same time, which made the experience a dynamic learning process. I assisted with project documentation, design intervention, and condition assessments. We frequently visited project sites, where I participated in surveys, documentation, and client meetings. The firm was very collaborative and multidisciplinary, and I often had the chance to connect with professionals and interns from the New York, Boston, and Washington, D.C. offices.

The courses I took in my first year gave me a strong foundation for the internship. From Contemporary Design in Historic Settings, I drew on ideas about integrating new design within historic buildings, while Building Pathology gave me tools for understanding materials, deterioration, and diagnostic approaches. Additionally, taking part in condition surveys and documentation photography not only reinforced what I learned in Documentation but also improved my ability to recognize signs of deterioration in buildings.

Over the course of the internship, I was able to develop additional technical skills. I became more confident working in Revit, which I used to produce the deliverable documentation for projects. I also learned how to put together sets for projects submission and clear presentation materials to communicate ideas.

The internship also offered valuable opportunities for professional development. I worked with architects, planners, and preservationists across the firm, many of whom shared their career paths and how they ended up working in these projects. Through the projects I was involved in, I engaged with a wide range of preservation challenges—from stabilizing historic ruins and exploring adaptive reuse strategies to preparing building condition assessments.

Overall, my time at Beyer Blinder Belle was a formative experience that connected what I have been learning at Weitzman with real-world practice. It gave me the chance to apply theories and methods I had studied, while also growing professionally and personally. Everything I learned and the relationships I developed will continue to guide me as I move forward in the historic preservation field. Many of the ideas I explored during this internship such as adaptive reuse strategies, the role of diagnostic tools, contemporary interventions, are themes I plan to continue researching in my thesis throughout the 2025–2026 academic year.



Image 1: Process of making a model for a Project



Image 2: Team presentation with the New York internship group



Image 3: Site visit

Beyer Blinder Belle Architects and Planners
New York, NY
Historic Preservation Intern

Shen-Tzu Chen

This summer I had the opportunity to learn from and work with the wonderful team at Bero Architecture and The Landmark Society of Western New York, which provided me with exposure to many different aspects of preservation practice and helped me find further direction in the field. Bero Architecture handles a diverse array of projects, ranging from adaptive reuse and condition reports to rehabilitation and assisting with historic building nomination reports aimed at tax credits. The Landmark Society of Western New York focuses on historic preservation advocacy and educational programs in the community. Throughout the ten-week internship, I learned from experienced architects and architectural historians and was inspired by their passion for preservation.

One of the main projects during my summer was a condition assessment of Temple Sinai, designed by local architect James Johnson. The condition report addressed all aspects of the site, including the landscape, masonry, carpentry, windows and doors, and overall MEP systems. To create the report, I drew directly on my academic coursework from Penn. During site observation, I applied knowledge gained from HSPV 5510 Building Pathology and HSPV 5550 Conservation Science, particularly in understanding the deterioration of different materials and their causes. The observation process was divided into interior, exterior, and roof areas, the latter accessed with the help of a lift. With two people working together, one recorded note by hand while the other took photographs. I not only learned by working alongside the experienced project architect but also identified some critical issues on site by applying my academic training. After the site visit, I categorized 350 subjects and items from the field notes into a worklist with preservation priorities and budget estimates.

Another major project took place during the four weeks I spent with the Landmark Society, where I assisted with the building descriptions for a neighborhood called Corb's Hill, which features Colonial Revival, Tudor Revival, and American Foursquare architecture. By repeatedly writing descriptions for each building, I came to understand the importance of precision and the professional standards of building documentation, skills I first encountered in HSPV 6000 Documentation: Research, Recording, and Interpretation I. I also joined the field survey, taking photographs of the neighborhood and learning how to complete a systematic survey of a large area in Perry Town using pre-arranged routes.

In addition to these projects, I worked at several other sites, performing site measurements and drafting plans for both the kitchen and bathroom of a residence as well as a fire-damaged house museum, Morgan Manning. These tasks built on the skills I learned in HSPV 6010 Documentation, Research, and Recording II, which focuses on measurement, drawing, and survey methods.

The work at the house museum was especially meaningful, as the building had not been fully documented before the fire. Our drawings therefore became vital for both preserving the record of the structure and supporting reconstruction plans. I was fortunate to work under the guidance of Chris from Bero Architecture and Megan from the Landmark Society, who gave me responsibilities that both tested and expanded the skills I had developed in my first year at Penn.

During the internship, I also had the chance to take a deep tour of Rochester's history with a retired historian, Cynthia, whose passion for preservation was truly inspiring. She generously drove me around the city for two mornings, sharing her knowledge and stories. Her perspective revealed how a city can hold layers of history that not only overwhelm but also enrich its citizens.

In summary, my internship with Bero Architecture and the Landmark Society of Western New York gave me an invaluable opportunity to apply and expand the knowledge and skills I had gained in my first year at the University of Pennsylvania. The experience both complemented my coursework and solidified my decision to specialize in architectural conservation.



Image 1: Site measurement at the Morgan Manning House Museum. Image Source: Anna Dnistrian, Bero Architecture.

Bero-Howk Historic Preservation Internship
Rochester, NY
Architecture Preservation Intern

Yuqi Chen

I spent this summer interning with the Center for Architectural Conservation (CAC), where I contributed to the documentation and mapping of Tumacácori National Historical Park in Arizona. My work was divided between generating rectified elevation drawings from field photography and developing a comprehensive GIS-CAD integrated mapping system to align the site's existing conditions with its historical evolution.

During the first half of the internship, my primary task was to use RealityCapture to produce interior and exterior orthographic elevations of the church, convento, granary, and other structures. In total, I generated 63 rectified elevations (Image 1), which required solving technical challenges such as missing data, alignment distortions, and lighting deficiencies in the interior photographs. These difficulties provided opportunities to experiment with projection orientation methods, manual control points, and post-processing techniques in Photoshop to refine the outputs.

In the latter half of the internship, I shifted focus toward mapping. Building upon the existing condition surveys and GPS points collected on site, I integrated ArcGIS Pro and AutoCAD Map 3D to align historical maps with present-day site conditions (Image 2). This workflow allowed me to accurately trace building footprints, site boundaries, and landscape features while assigning object-level attributes to improve future research usability. The result is a layered mapping system that consolidates changes in the site's built environment across different historical phases, providing a valuable reference for scholars and conservation practitioners.

Overall, this internship not only strengthened my technical skills in digital documentation and mapping but also reinforced the importance of combining field data, archival sources, and digital tools to inform preservation practice.

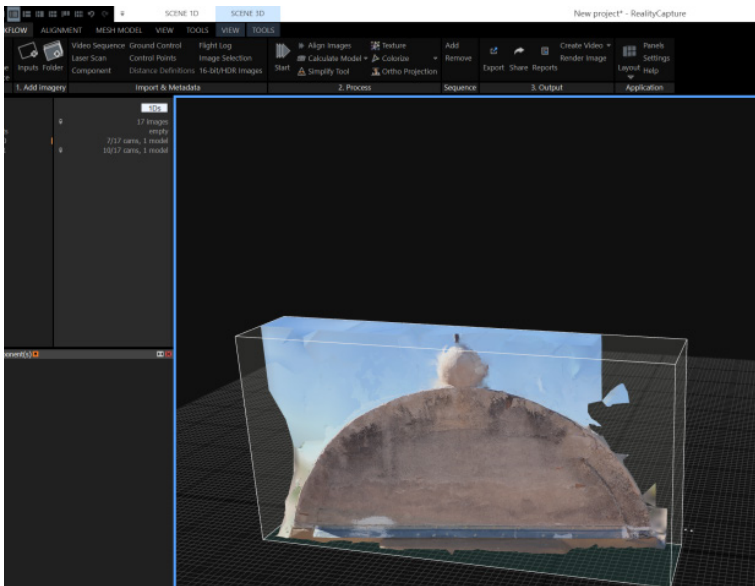


Image 1: Rectified elevations

Image 2: Aligned historical map + present day site conditions



Center for Architectural Conservation
Tumacácori National Historical Park, Arizona
Research Assistant

Caroline Griffis

I completed my internship at a conservation-focused training program at the archaeological site of ancient Herculaneum in southern Italy. The summer school was co-organized by the Weitzman School of Design, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and the Packard Humanities Institute. The program focused on the holistic management of challenging and multi-faceted cultural landscapes, and it combined site visits, fieldwork, collaborative research and a lecture series from experts in a wide variety of allied disciplines. The instructors and program participants were heritage professionals from different countries all over the world, and our diversity in experiences and perspectives positively contributed to our group dialogues and handling of assignments.

Herculaneum is the ruins of a large ancient Roman settlement, now situated within the modern-day city of Ercolano along the Bay of Naples. It was inscribed onto the UNESCO World Heritage List in 1997. The ancient city was 'buried alive' by the eruption of the proximal volcano Mount Vesuvius in 79 C.E. which covered Herculaneum in more than 20 meters of pyroclastic flow. This burial created unique conditions allowing for the conservation of organic materials, including carbonized wood, textiles, food and papyrus scrolls. Unlike many other historical sites, which have been poorly impacted by exposure and interventions, the long-undisturbed site of Herculaneum gives evidence of everyday life in Roman society at the urban scale. Herculaneum, rediscovered by tunneling archaeologists in the 18th century, has since served as a sort of open-air laboratory for evolving conservation practices, demonstrated through diverse examples across the site. Scaffolding from new structural stabilization work stands next to long-interpreted buildings, whose walls are supported by corroding, 60's-era reinforced concrete lintels. Much of the content and field activities in the summer school addressed the adverse effects of these 'modern' conservation solutions, where material incompatibilities have created long-term issues for preservation of ancient building fabric. The necessity of mindfully mitigating these and other site vulnerabilities, especially in the face of increasing environmental hazards, was continually reasserted throughout the program.

The program began by orienting participants to the immediate site and its physical complexities, including the conservation challenges at the infamous Villa dei Papiri, the ancient shoreline and the Bourbon-era excavated tunnels. The research groups tackled key issues by identifying material and deterioration types through conditions assessments, and also identified current and future risks to site integrity by analyzing environmental data. The cohort trained in relevant conservation technologies such as the use of salt tests and electromagnetic induction scanners, but we also recorded structures through hand sketching and photography (building upon skills from Documentation II). Through an interdisciplinary lecture series, our working cohort

was also exposed to ideas and best practices from leading experts in archaeology, engineering, environmental science, data management, etc. The lessons, which ranged from topics like navigating bureaucracy and public-private partnerships to maintenance work schedules, were all highly applicable to the sustainable management of heritage sites. Although there was an emphasis on material science and conservation strategies, the archaeological park also fully integrated stakeholder management into its curriculum. Modern Ercolano sits directly above and around the park, which necessarily obliges active collaboration with members of the community and municipality. The cohort interviewed Ercolano residents and created development proposals which would more cohesively integrate the archaeological site with the infrastructure and culture of the contemporary town, reifying its status as "living heritage".

Working on a "destroyed" site like Herculaneum provided constant reminders of the fragility of cultural heritage in the face of both ancient and modern risks. However, it also proved to be a profound lesson on resilience and unexpected opportunities. As a professional, I feel much more confident in my know-how, and better-equipped to make assessments. I have access to a large international network of talented preservationists, from which I will seek mentorship. In this field, it is easy to become disheartened by the numerous challenges of any historical site. However, my greatest takeaway from this experience relates to perspective: for creative and daring preservationists, the greatest challenges can become the most ground-breaking opportunities.



Image 1: Touring ongoing conservation works at the site's suburban bath complex

ICCROM
Ercolano, Italy
Herculaneum Summer School Participant

Yuming Jin

During the summer of 2025, I completed a professional internship with the Beijing Cultural Heritage Protection Center (CHP), a non-profit organization guided by the Beijing Municipal Cultural Heritage Bureau. CHP is committed to supporting the public in protecting cultural heritage, promoting community participation, and ensuring the transmission of technical knowledge in heritage conservation.

My internship mainly focused on surveying and documenting a traditional Beijing courtyard house (siheyuan) and researching its historical evolution since the mid-20th century. In addition, I conducted extensive fieldwork on traditional courtyard gateways (menlou), with special attention to their decorative brick carvings and conservation status.

The most memorable component of my internship was the comprehensive survey of a traditional siheyuan located in Beijing's central district. Originally established in the Qing Dynasty, this courtyard served as a high-status gentry residence, with over fifteen interconnected rooms and a well-organized functional layout around a central open space. Unlike many courtyard houses that were demolished or altered due to urban planning adjustments and real estate pressures in the socialist and marketization-reform eras, this particular property was preserved first as a residence for senior military officers during the socialist construction period, and later retained as an asset of a gigantic state-owned real-estate enterprise.

In carrying out the survey, I applied methods including producing CAD drawings, measured sketches, and photographic records that were acquired in HSPV courses such as Documentation, Research & Recording and Digital Media. Complementing the physical survey, I conducted archival research and oral history interviews to reconstruct the neighborhood's plan in the late 19th century and to trace social histories of the courtyard's mid-20th-century occupants. These methods reflected skills that I gained from Material Histories & Ethnographic Methods, and Documentation coursework, while also requiring adaptation to the particularities of Chinese archives and property records. The project culminated in a presentation of my findings—both the documentation outcomes and the historical research narrative to CHP directors and real estate managers, which provided an opportunity to translate academic knowledge into professional heritage advocacy.

Alongside courtyard documentation, I conducted large-scale field photography of traditional menlou (gatehouses) within innermost Beijing. The goal was to assess the conservation of their brick-carved decorations and their embedded wooden



Image 1: A View of a Traditional Beijing Courtyard House in disrepair



Image 2: Layout Drawings of a Traditional Beijing Courtyard House

pillar structure. These records will support CHP's ongoing initiatives, including the development of technical manuals for courtyard repair and public outreach campaigns to enhance awareness of heritage craftsmanship.

Working at CHP exposed me to a diverse community of professionals and stakeholders: foundation founders, university faculty, conservation engineers, local officials, real estate managers, and citizen volunteers. This network illuminated the complex stakeholder dynamics underlying heritage preservation in Beijing, where governmental policies, market forces, and community interests converge.

The internship also deepened my understanding of the differences in archival practices between China and the United States, particularly in how property transitions, photographic records, and historical maps are accessed and interpreted. This comparative perspective broadened my methodological toolkit and sharpened my critical awareness of preservation practice in cross-cultural contexts.

Most importantly, the internship reinforced my long-term aspiration to contribute to the protection of Beijing's historic environment. By engaging directly with documentation and recording, archival research, and public works, I felt closer to my goal of becoming an active preservationist who bridges technical skills with community-centered heritage stewardship.

Beijing Cultural Heritage Protection Center
Beijing, China
Historic Preservation Intern

Iqra Khalid

This summer, I had the opportunity to explore two distinct sides of masonry conservation – field documentation at a historic prison site and digital experimentation with augmented reality. I worked on-site at Eastern State Penitentiary in Philadelphia and remotely for the International Masonry Institute (IMI), gaining experience that bridged traditional preservation practices and emerging technologies.

Eastern State Penitentiary, a former prison operational from 1829 to 1971 and now a museum, served as the setting for my first project. I documented stone masonry across the 11-acre site. My work involved recording various typologies of stone, coursing patterns, mortar mixes, and existing conditions. While previous studies had examined specific sections of the site, a comprehensive, site-wide masonry survey was still lacking. My internship sought to tie data from earlier reports to field observations and identify potential research avenues to aid future documentation and conservation efforts. My process included archival research, field survey, data analysis, and drafting recommendations. I relied heavily on lessons from courses such as Documentation, Research & Recording; Building Pathology; and Digital Media for Historic Preservation. I learned how to create survey guides, synthesize field data, and produce documentation that can support conservation planning – a process that gave me a clearer understanding of masonry conservation.

My second project with the International Masonry Institute took me in a different direction – into digital experimentation through Preservation-AR, a pilot research project exploring the use of augmented reality as a tool for masonry preservation. The project included the deconstruction and reconstruction of a rubble stone wall approximately 7 feet wide and 5 feet high at the IMI/BAC John Flynn International Training Center in Bowie, Maryland. I processed laser scan data, created point clouds and orthorectified images, and developed a 3D model for AR projection. I also compared AR-assisted reconstruction with traditional techniques, analyzing advantages and limitations. My coursework in Digital Media for Historic Preservation proved invaluable as I navigated multiple software platforms and learned to generate digital outputs for AR workflows. This project also gave me the opportunity to collaborate with external researchers, including those from Fologram, the developer of the AR software, and the University of Bergamo in Italy – an incredible experience for a student.

Together, these two projects provided a rich combination of hands-on fieldwork and exposure to cutting-edge digital tools. They complemented my graduate coursework and strengthened both my technical skill set and my appreciation of masonry as a material and cultural resource. I am grateful to my supervisors and colleagues at Eastern State Penitentiary, the International Masonry Institute, the Center for Architectural Conservation, and external collaborators for their guidance and support throughout this experience.



Image 1: AR headset demonstration, IMI, Bowie, MD. (Source: IMI)
Image 2: Interior view of the penitentiary's southeast corner tower.

Eastern State Penitentiary
& International Masonry Institute
Philadelphia, PA
Jenrette “Learning by Doing” Intern

Louis Kuilan

Since 1979, the Preservation Alliance for Greater Philadelphia (PAGP) has protected historic properties through its easement program. The organization holds easements on approximately 250 properties, most of which are in or around the city of Philadelphia. To document conditions, PAGP conducts inspections every three years and produces a report on the current condition of each historic property under easement. As an easement inspector this summer, I completed approximately 94 reports, including 17 in collaboration with my coworkers. The work involved site visits and documenting deterioration through photography and surveys.

Beyond practical experience, this internship let me apply knowledge and skills from my coursework in conservation science, such as material identification and recognizing deterioration patterns across different materials. That background proved helpful when preparing recommendations for owners to implement over the next few years so they can better preserve their historic properties. The skills I learned in Documentation, Research, and Recording also came into play when managing large amounts and different types of data, including photographs, notes, and site forms.

Given the limited time of the internship, it was essential to work efficiently without sacrificing quality. I designed a standardized data-collection form, created a map to locate and track properties, linked a form to each property, and then uploaded the resulting data to Airtable. This workflow kept information consistent and streamlined reporting. Clear file naming and organized image sets further supported concise condition summaries and consistent recommendations. These experiences sharpened my observa-

tional skills, helped me better identify sources of deterioration, and strengthened my ability to manage large datasets effectively. I am thankful to the Preservation Alliance for Greater Philadelphia. From the beginning, they included me in staff meetings and various projects so I could learn about the programs they are working on. Because of this, I had the chance to network with professionals in the field and better understand the range of roles involved in preservation. Site visits to places like the Wharton Esherick Museum and Lynnewood Hall deepened my understanding of the decision-making process behind preserving complex sites. Overall, the internship was a valuable way to learn more about preservation while getting to know Philadelphia on a deeper level.



Image1: Inspection of the Marine Barracks at the Navy Yard
Image2: Site visit to Lynnewood Hall

Preservation Alliance for Greater Philadelphia
Philadelphia, PA
Easement Inspector

Annie Liang-Zhou

My work consisted of the research and documentation of two current World Monuments Fund (WMF) projects in Ulaanbaatar and Kharkorin, Mongolia, the Chojin Lama Temple and Erdene Zuu Monastery. These are two of the most significant religious heritage sites in Mongolia, representing different eras, architectural traditions, and cultural narratives. Both have survived periods of political and religious cleansing.

These two temple complexes have both been included on the World Monuments Fund (WMF) Watch Program in 2020 and 2025, as they are under the threat of urban neglect and extreme weather and climate events, respectively.

My scope of work included the photo documentation of temple complexes and shadowing the current director on his assessment of the temples. This rapid assessment is meant to assist WMF with the compilation of a strategic plan for next steps in country, as well as seeking sources of long-term funding and partnerships.

As for next steps, I will continue to assist World Monuments Fund's involvement with Chojin Lama Temple through the second phase of restoration of the Undur Gegeen Temple, known for its unique artworks, sculpture. Additionally, I will present a suggested action plan to increase community engagement and education programs for the advancement of traditional crafts and professional conservation practices in Mongolia.

I drew on research techniques and resources learned in HSPV 6010 Documentation, Research, and Recording, where I learned valuable skills in using a number of means to document the sites, as well as how to properly present the evidence through photo documentation and a rapid assessment of the current conditions, materials, and recommendations. The knowledge gained from HSPV 6250 contributed to my thinking of economic and cost assessments of the sites. The Wood Seminar (HSPV 7380) helped me to look at the sites through the materials, analyzing the conditions of the wood and artifacts.

This experience allowed me to put my academic learning to practice, to really look at sites through the lens of conservation and to cultivate a more comprehensive approach towards sites that face different types of urban and environmental challenges. I am also planning to visit these sites again next summer to continue my observations and assessments and to hopefully help the WMF and local teams in the execution of the conservation plan.

Through this experience, I was able to meet the director of the Chojin Lama Temple Museum and seek expert training and advice on how they approached the conservation of the site. In addition, I also met the Cultural Minister of Mongolia and sought help from two former Presidents of Mongolia to help direct more

Image 1: With Director Otgonsuren of the Chojin Lama Temple at Undur Gegeen Temple, the site of WMF's next phase of restoration, July 2025

Image 2: At Eastern Zuu Temple at the Erdene Zuu Monastery assessing the wood material and paint deterioration of the temple door, July 2025



World Monuments Fund
Mongolia
Special Project

Camilla Meeker

My architectural archaeology internship at Cliveden of the National Trust, sponsored by the Jenrette Foundation as part of their “Learning by Doing” Trade internship, was one of the most gratifying experiences of my preservation career and helped me elucidate my professional goals. Through the educational experiences in architectural archaeology, the mentorship and support offered by my colleagues and supervisors, and the unique and complex history of Cliveden itself, I gained a great deal of knowledge about the field and had an excellent summer experience.

The goal of my internship was to contribute to the “Transcending Thresholds,” project, an ongoing mission to research and interpret the service spaces in Cliveden and better understand the lives and careers of both enslaved and free service workers on the estate. My part of the project involved documenting and research the kitchen dependency and pantry and using architectural archaeology to perform selective demolition on the walls. After creating sketches of the rooms and measuring and documenting important details, I created portals in select places to learn more about the construction of these spaces and uncover possible hidden histories. For this part of my internship, I learned how to use hand tools and power tools, and how to determine which tools to use for which materials. I found that I gained a better understanding of historic building materials and construction methods which will help me as I continue my studies.

Alongside these new skills, I was fortunate that I was able to expand on some of the skills I learned in my Documentation, Research, and Recording classes. I utilized my new skills in architectural sketching, both by hand and through software such as AutoCAD, my architectural photography and photo-editing skills, and my research skills. My Domestic Interiors class was also very helpful, as it helped me figure out how to create an evidence-based floor plan and understand probate documents, both of which were necessary for my internship. I found that I was really able to hone these skills and develop them in a professional context.

The staff at Cliveden were not only welcoming, amiable, and generous with their time; they were always more than happy to help with professional development. Through our field trips, we had the chance to meet other site managers and preservation professionals, and I even had the opportunity to participate in some Historic Germantown meetings and events. My supervisor Libbie Hawes and our CEO Nancy Van Dolsen were especially eager to introduce us to fellow preservationists. We

also had the chance to work with architectural historian Willie Graham, who taught me a great deal about historic construction methods, American country estates, and effective methods of architectural archaeology.

I also learned that being a site manager usually means wearing many hats. Sometimes it involves the skills we’ve learned in the classroom, and sometimes it means balancing the budget for a new HVAC system, climbing up ladders to clear out cobwebs, and even finding homes for feral cats that live on the property. Overall, I had an incredible experience, and I am so grateful for the support of both Cliveden of the National Trust and the Jenrette Foundation. This internship has truly shaped my career path, helped me develop new skills, and renewed my sense of purpose in this field.



Image 1: Camilla showing off her architectural archaeology progress in the pantry at Cliveden

Cliveden of the National Trust
Philadelphia, PA
Jenrette “Learning by Doing”
Architectural Archaeology Intern

Esosa Osayamwen

During my internship at Cliveden (Benjamin Chew Sr. House), I assessed the circulation patterns of enslaved people, juxtaposing the social and racial divide between masters and the enslaved. Its architectural records revealed opulent interiors for enslavers but dilapidated, simplistic, and hidden service wings and stairs for the enslaved, a distinction that symbolized a cultural spatial practice of dehumanization. Paralleling this Georgian edifice to earlier classical forms, its circulation patterns stem from England, where the English Baroque architectural layout embodied a class separation. Facades express control, while the interiors favored Ciceronian principles of power. In maintaining this architectural ideology, enslavers concocted an American domestic landscape that reproduced similar elements of spatial neglect, but through a racialized lens that restricted Black autonomy and visibility. Cliveden encompassed three tiers of servitude, where white paid managers settled in refined spaces of movement, enslaved servants occupied sparsely detailed rooms, while cooks inhabited kitchen dependencies stripped of ornamentation, only reached by narrow staircases, not visible from the symbolic centers of the estate. As this spatial dichotomy evolved, later post-Renaissance plantations in the American South amplified classical motifs to subjugate Black populations. Thomas Jefferson, exposed to the portico, symmetry, and paneling, occupied visible circular spaces in Monticello, while he concealed the enslaved. By Jefferson splitting the slave living conditions from the main body of the

estate, he projected an earlier cultural morphology of racial segregation that hinged on status and erasure.

Drawing from HSPV 5340 and HSPV 6000—which centered on historic research methods and archival resource navigation—I gained proficiency in interpreting the aesthetics and material culture of slavery, emphasizing primary and secondary materials on Chew Sr.'s stances on servitude. In comparing him to Jefferson, I garnered that Chew Sr. echoed ancient philosophers Aristotle and Cicero, who posited that power aligned with the master. Adhering to this pro-slavery ideology, Chew Sr. projected a social order that abstracted the “rights of men” only to himself; thus, punishment and spatial neglect were necessary vestiges of domination. Emphasized in letters between himself, his brother Samuel Chew, and his son, Benjamin Chew Jr., Chew Sr. positioned himself as a natural ruler destined to subject slaves to his will. By traveling to Stenton (James Logan House) and Hope Lodge (Samuel Morris House)—where marginalized corridors and peripheral service areas for the enslaved were symbols of subjugation and invisibility—I analyzed how such spatial practices served as a paternalistic mechanism to generate social capital and control for Chew Sr.

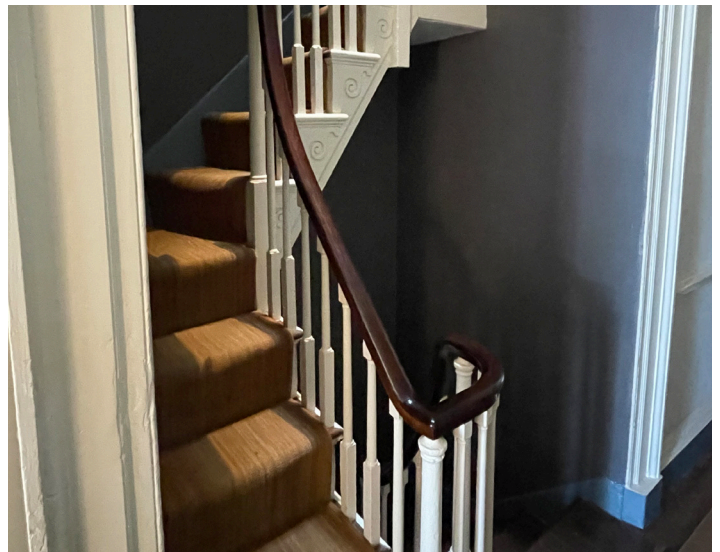
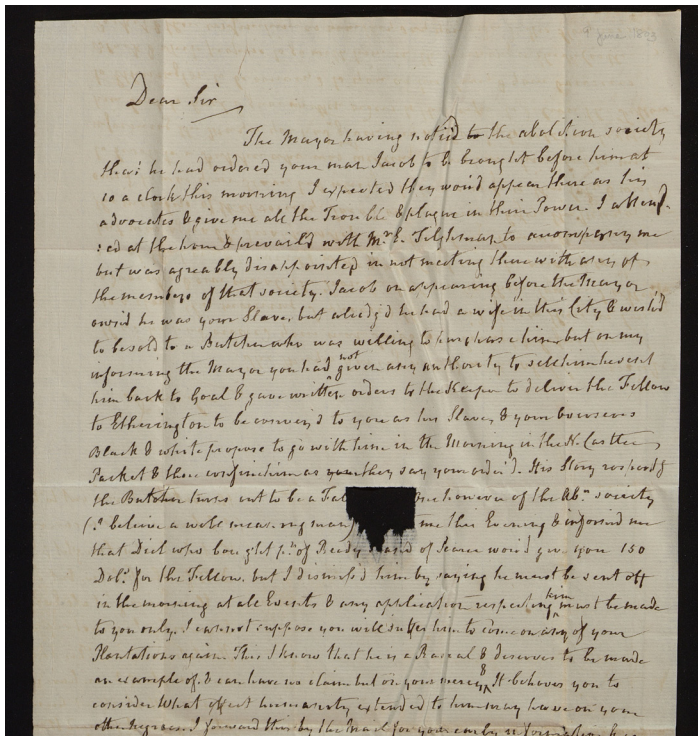


Image 1: Letter from Benjamin Chew Sr. to Samuel Chew on June 9, 1803. Image Source: Historic Society of Pennsylvania Chew Family Papers Digital Collection – Chew Sr. refers to his Samuel Chew's slave as a rascal.

Image 2: Taken by Esosa Osayamwen on July 25, 2025—Northeast View of Monticello servant stairs.

Cliveden of the National Trust
Philadelphia, PA
“Transcending Thresholds” Research Intern

Claire Puckhaber

Through May and June of 2025, I had the opportunity to work on the Vermont Marble Digital Humanities project as an internship funded by the Richard Hampton Jenrette Foundation for the Center for Architectural Conservation through Weitzman.

I began by spending four weeks working primarily at the Carving Studio and Sculpture Center: the historic site of the Vermont Marble Company's quarrying operations in West Rutland, VT. Over this time, I also visited other sites integral to understanding the company's development as well as archival collections relating to the company and the development of the Rutland area from the mid-19th to late 20th centuries. Studying remaining evidence on the site and looking at primary documents relating to the company's expansion and influence helped best prepare me for the four weeks spent at the office of the Center for Architectural Conservation in Philadelphia, PA, looking at interpreting the material I had gathered into graphics and narrative information to share with the public in an attempt to contextualize the rich cultural and industrial heritage the region possesses relating to the Vermont Marble Company.

In beginning this project, it was encouraging to see an abundance of information to draw from in the form of historic maps, historic photographs, and written text. Although somewhat daunting at times in trying to determine the scope of the work to be accomplished in these eight weeks, I consider it a "good" problem to have too much to learn from rather than not enough, and I am certain students such as myself from the University of Pennsylvania or other institutions have plenty of avenues to go down in the rich history of Vermont's marble valley.

In better understanding the ways in which the current site of the Carving Studio and Sculpture Center has changed over time especially since the first quarries began in the mid-19th century, historic maps and historic photographs have been especially helpful. Historic maps found online and in archives around Vermont such as the Vermont Historical Society in Barre, the Rutland Historical Society, and West Rutland's own map collection at the town hall prove incredibly helpful as a starting point for understanding what used to be and how the Vermont Marble Company operated over time.

When exploring areas surrounding the site's quarries and mills in the field, we were able to look at where we were in real time using GPS information in reference to these historic maps so we might better understand things we found or be better prepared for what to look for. Looking at historic maps like the 1910 Sanborn map helped us know what was once there and contextualize some of the remaining evidence we found, asking questions like "What do we know about these stones we've found? What does understanding whether they're rough or smooth tell us? Was this once the walls of a building with mortar? Or simply stones placed for the changes in grade needed to accommodate railroad tracks?"

In addition to this on site investigation, however, reading documents online, in print, and through archives like the Vermont Historical Society's Leahy Library proved crucial to understanding how the quarrying and mill process worked to better understand the unusual building types that made up sites like that in West Rutland. The 1892 facilities report,

for example, provides a detailed account of not only the structures that made up the site but their contents and how they functioned with power. One must first understand the function of items like gangsaws and sand feed pumps described in their historic context before being able to envision the methods of marble extraction and processing going on between quarries, tracks, and mills. Pamphlets like *Speaking of Marble* (1920) and *Little Pictures of A Big Industry* (1929) at the Vermont Historical Society's archives in Barre that were published by the Vermont Marble Company as well as online research aided in my understanding of the development of the stone quarrying industry in America as a whole as well as the marble industry's development specifically in Vermont.

Though somewhat nonlinear, this process of discovery—especially in my four weeks spent in West Rutland—influenced greatly the structure with which I tried to shape the website around. First, given that I began this process with little knowledge about how stone is quarried and processed, I aimed to present the public with an understanding of these processes and terminology, as I found it integral as a basis upon which to understand the history of the development of the Vermont Marble Company. Understanding the factors considered when deciding where and how to extract stone as well as the advances in technology that revolutionized stone quarrying in the late 19th and early 20th centuries brings some context to why the company grew as quickly and to the scale that it did.

Ultimately, so much of what I learned in just my first year in the HSPV program influenced my work on this project. Aspects of archival research and writing in Documentation I as well as photography and graphic representation built upon my architecture background in Documentation II helped equip me with the tools to make the website I created rich and engaging. So much of Digital Media was necessary not only in graphic representation but especially in file management and even just an overall approach to discovering new programs able to be integrated into the website. And certainly I would not have been able to map and understand the case study of the site at West Rutland as easily without the GIS class I took in the spring. All of this helped me do a better job of telling the story of the Vermont Marble Company; a story of land use, industrial heritage, business management, and labor rights all contextualized within the span of the company's influence over time.



Image 1: Working with Geospatial data on site

Center for Architectural Conservation
West Rutland, VT
Jenrette "Learning by Doing"

Grace Ragosa

This summer, I had the privilege of assisting Dell Upton with research for his upcoming talk celebrating the 250th anniversary of the United States Navy, as well as for his ongoing project. Undertaking this internship provided me with a valuable foundation for further growth in academic scholarship and gave me an opportunity to apply the skills I have developed in my studies so far to an intensive research setting.

My primary task was to locate and analyze the will of Commodore Jesse Duncan Elliott. In addition, I helped construct a family tree to develop a more holistic understanding of the Commodore. Prior to my research, it was known that he had a wife and several children, yet he appeared to spend little time with them. Although he maintained a residence in Carlisle, Pennsylvania during his life, at the time of his death he was living in a Philadelphia boarding house. The absence of any mention of his family, even in passing, presented a mystery I was asked to help resolve. This project required me not only to recover primary source documents but also to piece them together into a narrative that could clarify unanswered questions about Elliott's life.

To pursue these questions, I frequently visited the Philadelphia City Archives, where I examined wills belonging to both Commodore Elliott and his known family members. After locating these documents, I transcribed them and provided my analysis to Professor Upton to support a deeper understanding of Elliott's life and the complexity of his familiar relationships. I also conducted research in various digital archives, gathering census records, newspaper articles, and birth and death records, which

allowed me to assemble additional portions of his family tree. This process highlighted the importance of cross-referencing multiple types of records in order to create as complete a picture as possible when working with fragmented documents.

To successfully complete these tasks, I drew upon research techniques and resources introduced in HSPV 6000 Documentation, Research, and Recording I. That course exposed me to the Philadelphia City Archives and numerous other digital databases that proved critical to my internship research. Because I was already familiar with these repositories, I was able to locate documents more efficiently and think creatively about how to approach and answer the research questions. The course had also prepared me to evaluate sources critically, take meticulous notes, and remain flexible when unexpected gaps appeared in the archival record. These skills translated directly into the work I undertook this summer.

My internship challenged me to think creatively about how to construct a cohesive narrative from limited documentation. It also required me to refine my ability to produce clear, organized notes and to streamline my research methods so that I could effectively articulate my findings to Professor Upton. Working under his guidance strengthened my skills as a researcher, making me more efficient, focused, and driven in my scholarly work. This experience has given me greater confidence in my ability to conduct primary-source research, solve historical mysteries through careful analysis, and contribute meaningfully to a larger academic project.

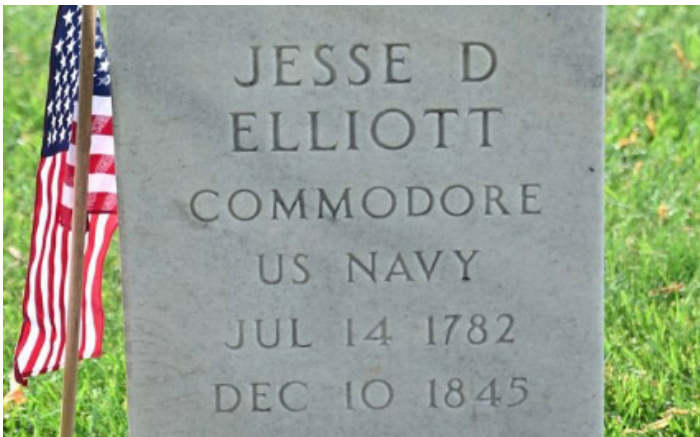


Image 1: Commodore Jesse Duncan Elliott's gravestone at Mount Moriah Cemetery, Philadelphia, PA. The marker shown has replaced the original slate marker which is now illegible.



Image 2: View of the stacks of cabinets with microfilm at the Philadelphia City Archives.

Dell Upton
Philadelphia, PA
Research Intern

Eleanor Schnarr

My summer internship at Philadelphia's Magic Gardens (PMG) was focused on the professional documentation of Isaiah Zagar's complex and immersive mosaic art environment. The experience was structured as a hybrid of remote work and extensive on-site fieldwork, requiring a self-directed and adaptive approach to project management. While my colleague focused on producing a rectified photograph of the West Wall, my primary responsibilities were the comprehensive photographic documentation of the garden's walls and the development of a sophisticated digital database to manage the thousands of images produced. My day-to-day tasks involved systematic photographic surveys of the site, which we subdivided into granular zones to ensure thorough coverage. The core of my work, however, was a long-term project to create an efficient and sustainable data management workflow. This culminated in the development of a custom software application that automates the creation and embedding of descriptive metadata, transforming a simple image collection into a powerful, searchable archive for PMG's staff.

This project provided a direct opportunity to apply methodologies from my coursework at Penn. The process of creating a systematic documentation plan and establishing a clear folder hierarchy for digital assets drew upon foundational principles learned in HSPV 600 (Documentation and Recording). The challenges of documenting the site's complex geometry and the subsequent processing of images in Adobe Photoshop were



Image 1: On-site fieldwork at Philadelphia's Magic Gardens involved navigating complex spaces and variable lighting to systematically document the condition of the mosaic murals in summer 2025.

practical applications of skills developed in our program's digital media courses. Furthermore, an experimental survey using Ground Penetrating Radar (GPR) allowed me to engage with advanced documentation technologies, assessing the tool's practical viability in a complex, real-world setting—a task informed by discussions in our conservation science seminars.

Throughout the internship, I significantly improved both my technical and problem-solving skills. The most impactful achievement was designing and building the "PMG AI Metadata App". Using Python and the Google Gemini AI model, I developed a tool that automates image analysis, keyword extraction, and metadata embedding, reducing a task that would have taken weeks of manual entry to just a few hours. This project was a powerful lesson in leveraging technology to solve a common bottleneck in cultural heritage documentation. I also learned a valuable lesson from the GPR survey: the critical gap that can exist between a technology's theoretical potential and its practical applicability on a site with irregular, vertical surfaces. Adapting to challenges such as variable lighting and constrained spaces also honed my ability to devise creative and effective solutions on the fly.

The internship was a fantastic opportunity for professional development. I worked under the direct supervision of Stacey Holder, PMG's Preservation & Facilities Manager, and received academic oversight from John Hinchman. This collaborative structure allowed me to learn from experienced professionals in both the museum and academic fields. Discussing project progress and receiving guidance from Ms. Holder provided invaluable insight into the day-to-day realities of preservation management at a unique and active public art site, while regular check-ins with Mr. Hinchman helped connect our practical fieldwork to broader academic and theoretical concerns in historic preservation.

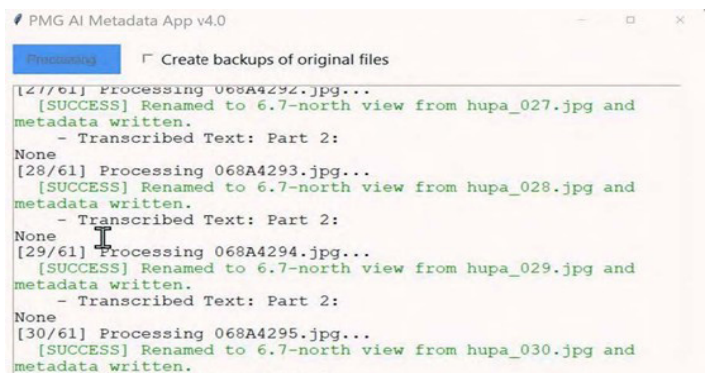


Image 2: The custom "PMG AI Metadata App," which I developed to automate the analysis and metadata tagging of thousands of photographs, creating a searchable database for future research and collections management.

Philadelphia's Magic Gardens
Philadelphia, PA
Jenrette "Learning by Doing" Zagar

Junxi Sun

From June to August 2025, I participated in an internship at Philadelphia's Magic Gardens (PMG), an immersive art environment created by Philadelphia artist Isaiah Zagar and now managed by the non-profit PMG organization. Known for its unique artistic atmosphere, PMG is an intricate mosaic landscape that blends sculpture, folk art, and found objects into a richly layered, experiential space.

Over the summer, the task I invested the most time and effort in was producing a high-resolution rectified photograph of the West Wall. This process required integrating field measurement, photographic documentation, and detailed digital processing. Over several weeks, I navigated complex site conditions, including narrow passageways, obstructed views, and changing weather, adapting camera setups and refining shooting strategies to ensure spatial accuracy and image clarity. Completing the rectified photograph was a valuable lesson in persistence and iterative problem-solving.

In the meantime, I contributed to the development of a systematic digital data management workflow. This included designing a structured folder hierarchy and creating an AI-powered metadata automation tool, which significantly streamlined the cataloging of thousands of images. The tool not only embedded detailed descriptions, keywords, and transcribed text into the images but also generated an Excel database with searchable metadata and thumbnails—transforming a time-intensive manual process into an efficient, scalable system. I also gained hands-on experience with Ground Penetrating

Radar (GPR) as part of an initial feasibility study for subsurface investigation at PMG. Although the technology performed more reliably on flat surfaces with a uniform material composition, it proved challenging to apply effectively on PMG's uneven, vertical mosaic walls. This exploration deepened my understanding of how theoretical potential can be limited by real-world conditions, shaping practical recommendations for future research.

Beyond the core documentation work, I participated in several special on-site activities: learning doily tile making and glass cutting while creating my mosaic piece, conducting field observations of mosaic-covered columns (and even discovering a bird's nest in a jar), and learning mosaic wall-cleaning techniques. These experiences enriched my appreciation of PMG's artistic processes and the care involved in maintaining a living art environment.

Throughout the internship, I strengthened my skills in site measurement and photographic documentation, CAD drafting, proficiency in Photoshop, data organization, and metadata automation. I also developed greater adaptability—whether adjusting to unexpected site constraints or rethinking workflows for efficiency. This summer's work has given me not only a robust set of practical tools but also a deeper understanding of the intersection between preservation, technology, and artistic heritage.



Image 1: Team work at the Philadelphia Magic Gardens



Image 2: On site assessment

Philadelphia's Magic Gardens
Philadelphia, PA
Research Assistant

Jian (Tom) Wei

The primary objective of my internship at PCDC is to assist in the creation of the upcoming Chinatown history exhibit. The preliminary exhibit design comprises three components: a Chinatown timeline contextualized within national and global history, an annotated streetscape comparison based on street view photographs from PCDC's internal archive, and a personal history section highlighting notable Chinese American individuals in Greater Philadelphia. I am responsible for the textual content for all three sections. Therefore, I spent most of my time building historical narratives based on my existing knowledge, as well as new research over the summer. For the timeline and building research, I spent most of my effort incorporating secondary sources to compile a list of major events in Chinatown and provide detailed descriptions for some of them. Working with my supervisor and colleague, I refined the event selection and description, as well as object selection, to better fit the event space.

Beyond planning and writing for the exhibit, I am also assisting PCDC with collecting oral history interviews with long-time community members. From structuring the interview and talking to the interviewee, to calibrating the recording equipment, I help to record the life experience of figures like Cecilia Moy Yep, founder of PCDC, David Choi, son of the owners of Hong Kee Grocery Store, and Martine Louie, brother of the current owner of Tuck Hing Chinese Grocery Store. In addition to oral history interviews that aimed to capture more fine-grained experiences through one-on-one interviews, I also helped to plan community outreach events that tried to raise awareness of the project while capturing a larger set of voices from those who participated in the events. The two major events were the June 22nd exhibit tabling at the Holy Redeemer Chinese Catholic Church and the July 12th exhibit open house at Crane Community Center. We were able to collect emergent stories, accept material and object donations, and connect with community members who are eager to share.

Finally, I was tasked with creating a finding aid for PCDC's internal archive. Being an organization with close to sixty years of history, PCDC has an enormous backlog of files and documents. This amounts to about 4 different storage locations filled with binders, drawers, boxes, and loose files. More importantly, many of these locations are physically inaccessible as they were blocked behind random items and supplies accumulated over the past two decades. Therefore, I spent time and energy removing the materials preventing access to the files. In addition to that, to address the quantity of documents in the archive, I petitioned for two high-school interns that PCDC received as part of the WorkReady program to help in digitizing photographs and cataloging existing documents. This process then involves training them in using software like Adobe Bridge and providing them with the necessary information on how to create a finding aid.

Through this experience, I was able to form a more detailed grasp of Chinatown's history through working on the timeline and building research. More importantly, I was able to build relationships with many community members through interviews and outreach events. These relationships open up further opportunities for more in-depth conversation during my thesis research process. Finally, access to PCDC's internal archive also gave me a series of valuable primary sources.

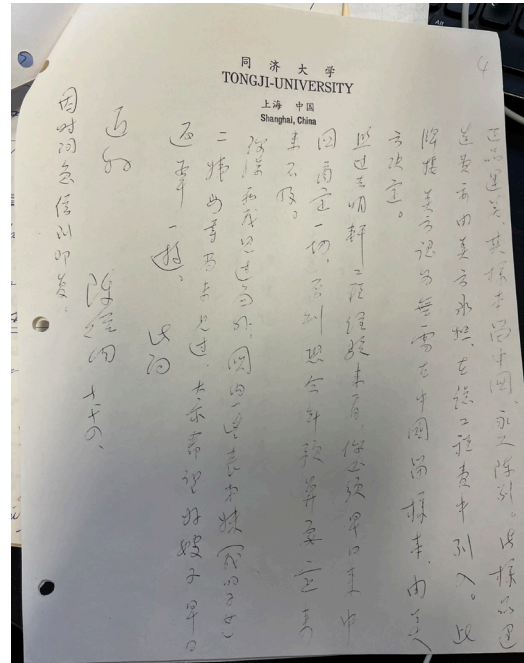
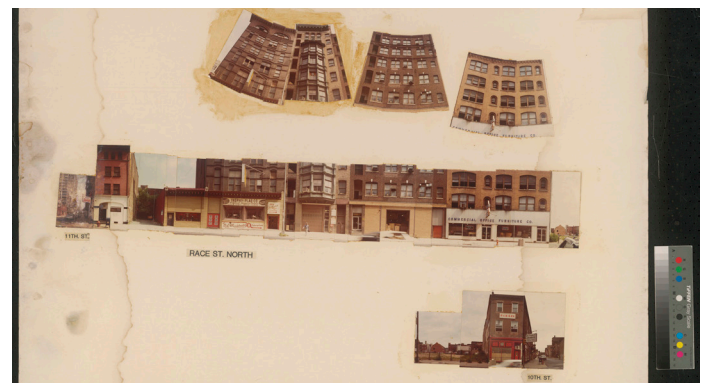


Image 1 (top): A letter from Professor Chen Cong Zhou, one of the most important experts on classical Chinese gardens, to PCDC.

Image 2 (bottom): One panel out of a six-panel street view panorama of Philadelphia's Chinatown made by Sabrina Soong in the late 1970s



Philadelphia Chinatown Development Corporation
Philadelphia, PA
Summer Research Intern

Shufan Xiao

This summer, I interned as a research assistant at PKUPDI, an institution covering urban planning, renewal projects, and, of course, preservation, located in Beijing, China. During the 6-week-long timespan, I took on various tasks ranging from map drawing and archival studies to field research and digitalization. It has been a great opportunity for me to compare preservation work back in my home country to the knowledge and practices I learned and experienced at UPenn.

Most of my work during my internship was linked to one of their projects concerned with the investigation and documentation of ancient trails in the coastal province of Fujian, in the southeastern part of China. The work was separated into different periods by counties, and I was able to participate in the documentation work of several counties, which were also at different stages. The techniques I learned and reinforced in Digital Media have been particularly helpful, as I helped process geodata in GIS software and converted them into maps and charts. Documentation skills covered in our Documentation class also played a vital part, when the team moved on to preparation work for other counties and the planned field trip in December 2025. My work subsequently switched to reading documents, some of which date back to the 16th century. These efforts helped locate ancient landmarks and towns on modern maps, and information about postal stations and trails often marked the directions of these passageways, serving as a guide for the follow-up field trips, which seek to examine the preservation status of these

trails. For me, the experience has provided valuable insight into the documentation of these “linear” cultural relics, which might be similar when it comes to other sites of transportation.

Some of my other works have been equally unforgettable. I was lucky to get the chance of taking the digitalization work of one of the “wild” Great Wall sites in the suburbs of Beijing, after we have discussed the site of its nature as both a commemorative and a historical monument in the Theories class several months earlier. It was a rewarding moment when I stood on the edge of the mountain where the Wall extended, after an ascend of over 1,300 feet! I was also able to get in contact with other preservation scholars in China, and was able to undertake some works related to them, including some follow-up studies on the natural landscape of Diaoyu Fortress in Chongqing, China, which was a major battlefield in the conquer of the Mongolian Empire back in the 13th century, and has also put effort into being designated as a tentative (and later inscribed) world heritage site.

I have been thinking about returning to China for further trainings and experience as a preservationist while adaptively applying the techniques I got in class in the past year. The experience of getting trained in the US and interning back in China proved to be a process of comparative learning, and I would surely cherish the chances to perceive the similarities and differences in archival studies, natures and characteristics of the sites, and the atmosphere of the preservation community.

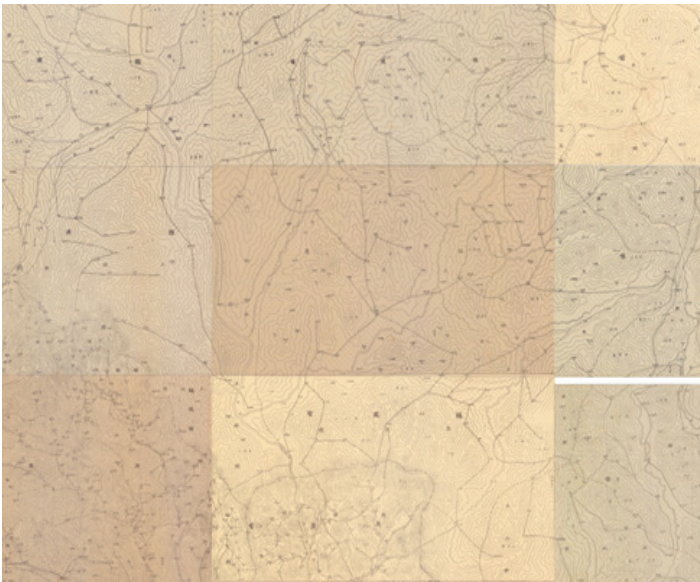


Image 1: Part of the map I processed as part of the Ancient Trails Project



Image 2: One of the pictures I took at the “wild” Great Wall sites

Peking University Planning and Design Institute
Beijing, China
Preservation internship

Kaiyue Yang

During the summer of 2025, I served as a preservation intern at the Palace Museum, working closely with mentors from the Engineering Management Department. Over the course of three months, from mid-May to mid-August, I participated in a variety of conservation projects that allowed me to engage with both the practical and intellectual dimensions of cultural heritage preservation.

At the outset, I contributed to the completion of a booklet documenting collected samples from the Mental Cultivation Hall. This task involved arranging the sequence of samples and drafting descriptive entries, which not only ensured the material was clearly archived but also deepened my appreciation of how systematic documentation underpins long-term preservation work. Building on this, I undertook a literature review of scholarship and critiques of the Mental Cultivation Hall over the past fifty years. Through organizing and analyzing these texts, I gained a clearer perspective on how the Palace Museum's own work has been evaluated within the broader field of preservation. I utilized the skills that I learnt from HSPV 6600 Theories of Historic Preservation to analyze how perspectives in preservation shifted in the past few decades.

Another significant part of my internship was archival organization. I helped restructure the department's records from the past decade, which had accumulated in a fragmented and disorganized manner. I designed a new filing system for digitalized materials, including multimedia recordings and first-hand preservation archives. To enhance the system's usability, I redrew technical drawings and graphics so that they corresponded neatly to the reorganized files. This experience taught me the importance of archival comprehensiveness and the value of accessibility for future research.

In addition to these responsibilities, I had the opportunity to develop my own research perspective. By examining the Forbidden City as a case study, I proposed a new approach to evaluating the authenticity of palace architecture complexes. This idea was well received by my mentors, who encouraged me to pursue it further. I subsequently drafted an independent funding proposal, which has since been submitted for review. This process gave me valuable experience in connecting theoretical reflection with practical institutional support.

My daily tasks included documenting ongoing preservation work, particularly related to wooden structure conservation. Through careful observation and record-keeping, I not only learned about traditional construction techniques but also contributed to the archival continuity that will guide future preservationists in identifying areas of past intervention. Looking back, this internship was both rewarding and transformative. It allowed me to contribute meaningfully to conservation projects while cultivating essential skills in documentation, archival management, and critical research. More importantly, it gave me firsthand insight into how theory, practice, and institutional collaboration intersect in the field of heritage preservation. These experiences have strengthened my resolve to continue exploring the challenges of conservation with both academic rigor and practical sensitivity.

Image 1: Kai and The Palace Museum

Image 2: Procedures in Documenting the Roof Structure



The Palace Museum, Beijing
Beijing, China
Preservation Intern

Chuan (Selina) Zou

I've long asked how "architectural conservation" and protection of the built environment can meet the latest technologies. How can a tradition rooted, engineering oriented field—one that carries historical responsibility—engage today's tools and today's questions? During my internship at the Second Surveying and Mapping Institute, I began to find practical, working answers that connect disciplinary heritage with contemporary methods.

Much of Hunan Province is hills, lake districts, and plains. Agriculture continually reshapes surface vegetation, settlement patterns, and the landscapes we see. Cultivation not only gives form to "landscape," it also binds local livelihoods. Effective protection must therefore be place based and sustain a coupled system of ecological change from farming, visible land cover, and human activity. My internship became an exploration of agricultural landscapes and a study of crop distribution on the ground using GIS and computational techniques drawn from remote sensing and computer vision.

Knowing where crops are planted matters: it lets us track year to year land use change and shifts in landscape condition. Crop patterns also reflect farmers' income prospects and the sustainability of rural economies. The difficult part is measuring consistently and at scale. GIS links data to geography—but where do we obtain current, synoptic vegetation information? From satellites. Time series imagery provides spectral bands and indices (e.g., NDVI, NDWI) that are strong indicators of land cover and crop types. I learned to access open datasets through platforms such as the Copernicus Open Access Hub, USGS/ NASA portals, and Google Earth Engine's public catalog.

In practice, I visited farming areas in the hills and around the plains and lakes and—together with researchers—mapped rice phenology (early, mid, and late seasons; early rice mainly March–May). Using Google Earth Engine and ArcGIS Pro with ESA Sentinel 2 (10 m) data, we extracted NDVI/NDWI, applied cloud–shadow masking, and built area wide models to identify likely rice pixels. We validated outputs against field observations and very high resolution imagery and iterated thresholds, so the temporal signatures matched known planting calendars.

For village scale studies, I trained convolutional neural network (CNN) models on Google Colab. I also designed a lightweight labeling workflow to sharpen boundaries around paddy fields and reduce confusion with bare soil or shadows.

This internship deepened what I learned in the Digital Media course: programming with GIS and analyzing geospatial data pipelines end to end. It also sharpened my understanding of "landscape" and "environment": regional research depends heavily on aerial and satellite imagery. "Survey and documentation," a constant theme in Documentation class, which could extend to satellite data, computer vision–based object detection, and point cloud computation.

Equally important, I met scholars working across environmental and conservation fields and gained a clearer view of my own direction: to study how seasonal cultivation interacts with settlement fabric and heritage landscapes in hilly southern China, using reproducible, open remote sensing workflows. Under colleagues' guidance, I practiced drafting research proposals and structuring a study—from framing questions and methods to dataset selection, timelines, risk management, and evaluation.

Agricultural landscapes are often left out of history because they lack buildings. Yet farming systems are essential to urban planning and landscape conservation. In China, rural landscapes are not background—they help anchor community memory and identity.



Image 1: Site visit

The Second Surveying and Mapping Institute
Hunan, China
GIS and Algorithm Research Intern

