Megan Elizabeth Leight
Teaching Assistant Professor, School of Art and Design
College of Creative Arts and Media, West Virginia University
MLeight@mail.wvu.edu | 304-203-0300

Wednesday, March 3, 2026

Dear CCAM Mentored Research Award Committee –

This letter is in support of my three undergraduate research students who are submitting their project for consideration for the College of Creative Arts and Media (CCAM) Mentored Research Collaborative Award. Two of the students are from CCAM - Kelsey Clodfelter and Grace Johnson, while Andrew Bonner is from the Eberly College of Arts and Sciences. Clodfelter is a Technical Art History major, Johnson is a double-major in Art History and Museum Studies and Anthropology, while Bonner is an Anthropology major. They are submitting their research work, *Drifting into Dresden: Using the Codex to Expand our A.I. Maya Database.*

The students are working on annotating datasets of different art objects from the ancient Maya culture. We started with Maya vessels, but have since moved on to ancient Maya codices, documents written on bark paper during the Classic Period (c. 800-1200 CE). The goal has been to develop a robust dataset that can serve as the basis of our training data for advanced segmentation using artificial intelligence. Our first project publication in May 2024, *Segmentation of Maya hieroglyphs through fine-tuned foundation models,* elaborates on the early success of the project using around 100 annotated images as the core dataset. Since that time, the undergraduate researchers have added hundreds of annotated images from Maya vessel to our dataset (current number: 1334). Our PhD student Shivam is preparing to run these additional annotated images in March 2026 to see how the ML/AI platforms have been improved on.

As background on our funding, I was awarded a 2024 West Virginia University Humanities Center collaboration grant for $15,000 to work in coordination with the Statler College of Engineering's Department of Computer Science that began the project. This past summer, 2025, I was awarded a Myers Distinguished Research Fund from the School of Art and Design, which has support student research on this project during AY 2025-2026. This has been an exciting multi-year research project that looks to the future of art historical inquiry by incorporating machine-learning (ML) and artificial intelligence (AI) technologies in the study of ancient works of art.

We will present the updated results using the Maya vessels and codex pages at the Society for American Archaeology academic conference, which will be held in San Francisco, CA in April

2026. In the past, my research students presented parts of this work at the Undergraduate Research Day at the Capitol (URDC) in Charleston, WV (2025) and the National Conference on Undergraduate Research (NCUR) in Pittsburgh, PA (2025). Clodfelter, Johnson and Bonner already submitted their application to attend the WVU Spring Symposium (2026) as well. So, it's been an incredible research project for my students to gain academic experiences at the university and across the United States.

I will close by emphasizing the critical importance of having a well-curated set of images to rely on for this project. As Clodfelter, Johnson, and Bonner shared in their video about the process, the meticulous annotation work is labor-intensive and relies on assessing the visual characteristics of Maya hieroglyphics to accurately ascertain their shape, form, and complete glyph block. Their work will serve the project research output and other scholars in this field well in the future, particularly as we move to make the dataset publicly available this summer.

Please contact me with any questions you may have about our project.

Sincerely,

Megan Leight
Teaching Assistant Professor
School of Art and Design