West Virginia University
COLLEGE OF CREATIVE ARTS AND MEDIA

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Dear CCAM Mentored Research Award Committee –

This letter is in support of my two undergraduate research students Kelsey Clodfelter and Claire Davis on the *Artful Algorithms: Maya Decipherment* project this past academic year. They are submitting their research work as part of the collaborative award for the College of Creative Arts and Media.

We were 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 on this technical endeavor. The original grant included my two Technical Art History students' names (Clodfelter and Davis) as well as a PhD student in Computer Science (FNU Shivam) and my collaborator Prashnna Gyawali. This has been an exciting 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.

Our first project publication in May 2024, *Segmentation of Maya hieroglyphs through fine-tuned foundation models,* elaborates the earlier success of the project using around 100 annotated images as the core dataset. Since that time, the undergraduate researchers (Clodfelter and Davis) have added hundreds of annotated images to our dataset (current number: 625). Our PhD student Shivam is preparing to run these additional annotated images in March 2025 to see how the ML/AI platforms have been improved on. We will present this updated work at academic conferences in the latter part of the spring term including several the undergraduate students are spearheading including the Undergraduate Research Day at the Capitol (URDC) in Charleston, WV; National Conference on Undergraduate Research (NCUR) in Pittsburgh, PA.

I will close by emphasizing the critical importance of having a well-curated set of images to rely on for this project. As Clodfelter and Davis 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.

My best,
Megan