

Mapping Memory: Geospatial Preservation at Homestead Cemetery, Pa.

Thursday, October 23, 2025 2:00 PM (20 minutes)

Homestead Cemetery, a significant landmark in the Borough of Munhall, Pennsylvania, has been an integral part of the Pittsburgh region's history since 1886. Its long and rich history, spanning from the Civil War to the Homestead Steel Strike and the Civil Rights Movement, is the final resting place for thousands of individuals. That said, the passage of time, erosion, and neglect have led to many graves becoming unmarked, unreadable, or completely lost, posing difficulties for ongoing record-keeping and preservation efforts.

Starting in Spring 2024, the Homestead Cemetery Board partnered with student researchers at the University of Pittsburgh to address this issue using GIS technology. The project asked a central question: How can spatial analysis and geolocation tools help identify and document missing graves? To answer this, the team marked each visible grave as a reference point, using estimated three-foot intervals to indicate probable grave locations along each row. A Trimble DA2 receiver was used to collect precise GPS data, which was then imported into ArcGIS Field Maps for attribute collection and visualization.

Within ArcGIS Pro, student researchers began to analyze spatial patterns, estimated missing grave positions, and created a comprehensive, digital record of the cemetery's layout. This geospatial approach not only helps locate unmarked or lost graves but also offers a promising methodology that can be replicated in other historic cemeteries facing similar preservation challenges.

Organized Session Details

Is there a SINGLE day you are unavailable to present?

October 25, 2025

Is there a time of day you are unavailable to present?

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Session Classification: Student Poster Competition

Track Classification: Spatial Analysis & GIS