Objective: Develop, via an independent study, a GIS analysis through the application of drone technology to map, quantify, qualify, and assess the current condition of the Historic Aldridge Mill within the Angelina National Forest.

Overview: Perform the following tasks as described:

1. Use GIS and drone technology to map, quantify, qualify, and assess the current condition of the Historic Aldridge Mill within the Angelina National Forest.

2. Integrate Lidar data into the GIS and drone analysis to increase the quantification and site-specific locational awareness and increased geographic accuracy of the historic Aldridge Mill buildings.

3. Integrate local topographic variables and earth surface features into the GIS and drone analysis to increase the quantification and site-specific locational awareness of the historic Aldridge Mill buildings relative to unique topographic conditions at the historic site.

Assignment: Your goal is to meet with Dr. Unger on a weekly basis, and interactively with the faculty drone team, for guidance and suggestions. In particular, and per item listed above, you will:

1. Complete the above project as assigned.

2. Prepare a poster of the project findings in PowerPoint format ready for submission to a natural resource-based conference.

3. Prepare a talk representing the project findings in PowerPoint format ready for submission and presentation at a natural resource-based conference.

4. Prepare a manuscript representing the project findings ready for submission in a peer-reviewed GIS and drone based academic journal.

Grading: Your grade will be based on an analysis of your ability to meet the following:

- completion of the project, 40 percent
- completion of the poster, 30 percent
- completion of the manuscript, 30 percent

A ≥ 90%, B ≥ 80%, C ≥ 70%, D ≥ 60%, F < 60%

Please note that grading will be more intense than a typical graduate level class and more representative of doctoral level productivity.