Mizzou
University of Missouri

MS in Data Science and Analytics with Emphasis in Geospatial Analytics

Graduates of the Master of Science in Data Science and Analytics who pursue the Geospatial Analytics Emphasis Area will achieve the following educational objectives, in addition to the core program objectives (https://catalog.missouri.edu/graduateschool/datascienceanalytics/ms-data-science-analytics/) while becoming immersed in Geospatial Big Data computational ecosystems:

- Students will have a firm understanding of the structure of spatial data and its integration with spatial analysis tools.
  Students will develop a robust understanding of the caveats that can be encountered in geospatial data structures and analysis.
- Students will have a firm understanding of geospatial data structures such as vector and raster data and their use in data analytics.
- Students will develop expertise in designing, managing, accessing, and manipulating geospatial data repositories.
- Students will gain knowledge and experience with the exploitation of geospatial data that is stored in a variety of formats and source locations, as well as experience developing geospatial visualizations of data, blending multiple geospatial data layers as well as non-spatial data.
- Students will have a solid understanding of the basic concepts, principles, and techniques in remote sensing.
- Students will understand the spatial and spectral characteristics of remote sensing data for passive, active, thermal, and other sensor phenomenologies.
- Students will have an ability to acquire and exploit remote sensing data using a variety of tools and techniques for real-world applications.

Degree Requirements

Students will need to complete the core program objectives (https://catalog.missouri.edu/graduateschool/datascienceanalytics/ms-data-science-analytics/) in addition to the emphasis area electives below.

Emphasis Area Electives

DATA_SCI 8510	Geospatial Data Engineering and Geodatabase Development	3
DATA_SCI 8520	Spatial Analytics and Geostatistical Analysis	3
DATA_SCI 8530	Geospatial AI and Image Analysis	3

Note: Not all electives are offered each academic year.