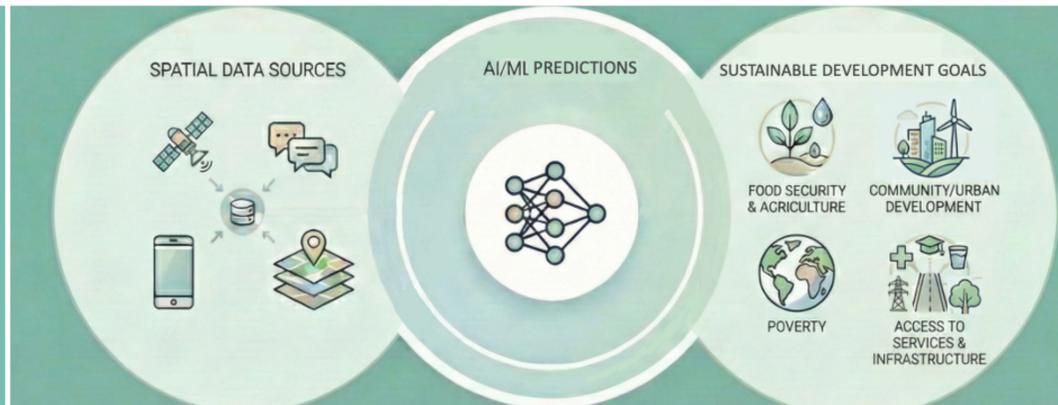# AI/ML/Spatial Data Science for Global Development

New graduate-level course offering from the School of Social Work for Spring 2026

Course: 16:910:657
Timing: Tues 9:00 - 11:40 AM
Location: SWG-A

This Ph.D.-level course introduces students to the rapidly evolving field of applied data science for global development and social welfare policy. Students will work with novel data sources, including satellite imagery, crowd-sourced maps, and social media data, to support granular needs assessments and inform policy design and evaluation in global development contexts. Through hands-on applications, students will examine how spatial data can be used to measure poverty, food security, and access to essential services at a fine-grained level, and how these assessments can help identify populations in need and support more effective resource distribution.

Designed as an interdisciplinary laboratory, the course welcomes students from a wide range of fields, including but not limited to social work/welfare, public policy, international development, computer/data/information science, economics, statistics, business management, and geography. Students will form project teams that combine diverse strengths, such as policy insights, programming skills, or access to unique data sources, to develop policy-relevant research projects. Each team will work towards an initial draft of a conference paper for interdisciplinary venues.

A programming lab component supports students working on data-intensive projects using Python, with supplementary use of QGIS. The course also plans to invite scholars or practitioners as guest lecturers, providing students with exposure to cutting-edge applications of data science in global development and social policy. Prior coursework in statistics, with experience using statistical software or programming languages (such as Stata, R, Python, MATLAB, or ArcGIS), is required.

Scan the QR code to register for this course.
Students from other departments may enroll with the instructor's permission.

Learn More!

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