Community Data Lab Projects
Kansas Data Science Consortium

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Overview

The Kansas Data Science Consortium Community Data Labs has several sponsored data projects from community partners. Each spring, this capstone-style class is offered to undergraduate upperclassmen and graduate students. You can participate in one of these projects by enrolling in Community Data Labs, course code PSYC 699 or POLS 699. Email Dr. William Duncan at to ask for a permission code to enroll.

What is needed to work on the projects?

Students will be well-prepared to work on the Community Data Labs projects if they have some skill with a statistical software package like Stata, RStudio, or Python and have some ability with statistical analysis such as regression, causal inference, and/or machine learning.

Community Data Labs Project Timeline

These projects take place in Community Data Labs (PSYC 699 or POLS 699). To work on them, please enroll in one of those sections. The class meets Tuesday and Thursday at 12:30 PM.

- January 21st, 2025: class begins, choose project
- February 11th, 2025: submit data exploration update
- Mid-February, 2025: meet with project sponsor to share update
- March 4th, 2025: submit data analysis update
- April 8th, 2025: submit rough draft of poster presentation
- April 26th, 2025: attend Kansas Data Science Consortium Annual Conference in Lawrence, KS to present your project poster
- Continue project work through summer 2025 as necessary

Community Data Labs Project Sponsors

Douglas County	Ground Water	KS Dept. of Commerce
Wyandotte County	Management Districts	KS Dept. of Education
Dodge City	1, 3, 4	KS Board of Regents
Garden City	ARISE	KS Dept. of H&E
City of Lincoln, NE	Lied Center	KS Dept. of Agriculture
Kansas City, MO	Lawrence Arts Center	KS Water Office
City of Lawrence	KS Action for Children	KS Broadband
City of Wichita	KS Natural History	Development
City of Topeka	Lawrence Public Library	
City of Manhattan	Governor's Office	

Some of these projects use open-source data and some use proprietary information. Each requests various deliverables. For more information about analysis for a particular project sponsor, contact kansasdata@ku.edu

Projects Occur at Several KS Universities

Students from the University of Kansas, Kansas State University, Wichita State University, Baker University, Johnson County Community College, and Butler Community College will have a chance to choose these projects. There may be collaboration opportunities across campuses for students who have selected the same projects if the students wish to collaborate. It is not required and it is not facilitated as part of the course.

Table 1. Faculty involved at each institution running Community Data Labs

Faculty by Institution	KSU	WSU	Butler
	Lior Shamir	Sergio Salinas Monroy	Janice Akao
	Safia Malallah	Fujian Yan	Noreen Templin
	Baker	**KU**	**JCCC**
	Judy Smrha	Michael Branicky	Suzanne Smith
	Jiji Osiobe	Jeffrey Girard	
		William Duncan	

In addition to the faculty listed in Table 1, it is possible to involve other faculty as mentors to specific projects where their expertise is a good fit.

A sample of project descriptions

Groundwater Management Districts Agriculture is an important part of life and community for people living in the areas covered by Groundwater Management Districts (GMDs) 1, 3, and 4. Looking for ways to ensure sustainable water is vitally important to keep these communities alive and viable. This project focuses on the connection between water use and land use in the western GMDs in the state of Kansas.

Lawrence Public Library A local public library is a vital anchor institution in the community they serve. Understanding the full impact of libraries on their communities is important to communicate their relevance and to think about how they can broaden their impact. This project examines the impact of library funding on community outcomes, ranging from student achievement to cultural vibrancy.

City of Lawrence Local municipal governments run a range of services that support community wellbeing. One of the most important functions of a city is in municipal services, ranging from trash collection to city water. This project focuses on water billing data in the city of Lawrence and seeks to examine patterns in water use across space and over time.

Kansas Office of Broadband Development Availability of high-quality broadband is critical for residents to access good paying jobs and participate in many aspects of modern life. This project looks at the provision of broadband services in Kansas and connects the availability or lack thereof with other metrics such as job density, educational outcomes, and other quality of life metrics.

Kansas Department of Commerce Most jobs today require some level of training to perform. This training can be provided by colleges and universities, technical institutes, and apprenticeship programs. Many skilled trades use apprenticeship programs to build pipelines of workers into their industries. This project analyses the Kansas Registered Apprenticeship Program and connects data on apprenticeships with other community characteristics such as active industries, common occupations in that community, and wellbeing metrics around quality of life and cost of living.

Kansas Department of Agriculture There are many programs that are available to farmers to incentivize the use of their land for conservation. These programs are funded through Federal block grants and administered through state agencies like the Kansas Department of Agriculture. The project analyses the impact of conservation programs in Kansas and connect data on spending by those programs with land use and aquifer well depth.

Lied Center of Kansas Active performing arts are vital to the quality of life in communities. The Lied Center of Kansas works to ensure a wide range of performing arts are available to residents of Lawrence and surrounding communities. This project looks at the event series that the Lied Center of Kansas sponsors and the engagement with the surrounding community.