Training aspiring data scientists to solve problems that matter.

Data Science for the Common Good (DS4CG) is a summer program that trains aspiring data scientists to work on real-world problems that benefit the common good. Our teams of computer science Master’s students collaborate with partner organizations working in public health, education, health and wellness, environmental conservation, and more.

“We have a responsibility to use the tools and knowledge we have to make progress in society, especially in areas where these tools may not have been applied previously.”

- Tom Walsh, DS4CG volunteer mentor, Director of Artificial Intelligence and Data Science, Kronos

Learn how to become a sponsor or partner.

Contact:
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Three ways you can support Data Science for the Common Good

Sponsor DS4CG
Sponsors make Data Science for the Common Good possible, and ensure that this is a sustainable program that can continue to benefit both students and public-good organizations.

Provide mentors
Mentors volunteer 1-2 hours per week over a 12-week session, providing guidance and expertise to student teams. Our mentors find the experience both challenging and rewarding.

Expand your impact
Does your company already have a corporate social responsibility (CSR) program or mission? DS4CG can augment the work you do with your CSR community partners.
Can your organization be a DS4CG partner? Here are some questions to consider:

- Do you have a large volume of data, or data from disparate sources?
- Do you lack the time or resources to make use of the data?
- Do you have strategic questions that can be addressed with data?
- Can you devote staff time to working with a student team over a 12-week summer session (on average 1-2 hours per week)?

If the answers to these questions is Yes, contact us to discuss becoming a DS4CG partner!

How does it work?

1. We work with you to define a problem that can be addressed with data science.
2. We assign two or more DS4CG fellows to work on the problem over a 12-week summer session. Students are paid by UMass Amherst, work on-campus, and are supervised by UMass faculty and industry mentors.
3. Weekly status calls or meetings are for discussion and status reports.
4. A final presentation is held, followed by transfer of deliverables.
The Charles River Watershed (CRWA) team analyzed 25 years’ worth of water-quality data collected by citizen scientists, to identify patterns and trends in the levels of E. coli, phosphorus, and chlorophyll. The results will inform policies that promote responsible watershed management and a healthy river ecosystem.

The Greater Holyoke YMCA team analyzed membership and program participation data in order to predict membership churn. The results will help predict members at risk of dropping their membership, giving the YMCA the opportunity to proactively assess and respond.

The Massachusetts Department of Public Health (DPH) team aggregated data from disparate sources to develop risk assessment scores at the city/town level. The results will help the DPH deploy resources more effectively and efficiently, in areas that need them most.

The Springfield Public Schools (SPS) team combined student data with college-enrollment data from a national clearinghouse to identify factors contributing to post-secondary school success. The results will help SPS fulfill their mission of graduating students who are college and career ready.

The Metropolitan Area Planning Council (MAPC) team worked on enhancing a forecasting technique originally developed at Northeastern University to project scenarios about future populations, enhancing its efficiency, ease of use, and breadth of applicability. The results will help MAPC to better serve the cities and towns that rely on their expertise for municipal planning.

The Nature Conservancy (TNC) team devised a tool using a computer-vision algorithm to automatically detect whether or not a photograph contains an animal. TNC can apply this tool to photographs captured by remote motion-sensitive cameras placed in the wild, in order to monitor wildlife corridors and better guard against animal-vehicle collisions on roadways.

“Not only did the DS4CG team develop an interface that made it easy for the user to apply our methodology, they also made significant improvements to the methodology itself. The synergy that their knowledge of computer science and programming skills contributed to our project far exceeded our expectations.”

~ Alan Clayton-Matthews, Associate Professor, Public Policy and Urban Affairs; and Economics, Northeastern University