

# Data Science For Social Good

## Summer Fellowship



The [Data Science for Social Good Fellowship \(DSSG\)](#) is a University of Chicago summer program run by the Center for Data Science and Public Policy for aspiring data scientists to work on machine learning, big data, and data science projects with social impact. Working closely with governments and nonprofits, fellows tackle real-world problems in education, health, energy, transportation, economic development, international development, and more. For three months in Chicago they learn and apply data science skills in a collaborative atmosphere, and learn from mentors coming from industry and academia.

The Data Science for Social Good Fellowship has three main goals:

1. **Training Fellows:** To increase the quality, quantity, and diversity of students capable of doing real-world data science, specifically to solve social challenges.
2. **Creating Use Cases and Proofs of Concept:** To help governments and non-profits understand what's possible and learn how to do it.
3. **Training Governments and Non-Profits:** To increase the number of organizations using data science to solve social challenges.

Since 2013, DSSG has produced the following outcomes:

1. **Fellows and Capacity Building:** We've taken computer science graduate students and augmented their academic knowledge with applied skills that have enabled them to solve real-world data science problems effectively. We've also been able to take students from statistics, physical sciences, and social sciences and train them in computational and large-scale data analysis skills. We've trained all fellows to communicate effectively with their project partners and the public. The result is 170 interdisciplinary fellows who are equipped to identify, scope, and solve real-world social issues using data and communicate their solutions and impact to government agencies, non-profits, and the broader world.
2. **Use Cases and Proof Points:** We have completed 52 projects in education, transportation, disaster relief, energy, economic development, infrastructure, and more. Examples include building the first [data-driven early intervention system](#) to identify police officers at risk of having an adverse incident (Charlotte-Mecklenburg PD, Metropolitan Nashville PD), [a predictive model that identifies children who are likely to get lead poisoning](#) so officials can remove the hazard before exposure (Chicago Department of Public Health), and [a tool that analyzes state legislation to find similar text in other bills and model legislation written by lobbyists](#) (Sunlight Foundation and several journalists who have used it to write stories).

**Reusable Solutions:** We make our code publicly available on [GitHub](#) so other government agencies and non-profits can use our work. This includes the data science pipeline and visualization tools that can be reused to seed similar projects by agencies and universities.

3. **More Data-Savvy Government Agencies and Non-Profits:** DSSG not only helps its partners tackle projects; it also provides "on the job" training for them. Partners learn to use

data effectively and efficiently, including developing an understanding of what data should be collected and how to attract, hire, and retain capable data scientists. Our partners also become part of a network of similar organizations, so they can learn from and collaborate with like-minded individuals and organizations. This program has allowed us to create several training programs and materials that we've distributed to governments and non-profits including "[Data Science Project Scoping Guide and Worksheet](#)", "[Data Maturity Framework](#)" to help them assess if they're ready to start a project, as well as overview of what's possible to do using data science in governments and non-profits.

### **Numbers and Logistics**

We typically get ~900 applicants from over 100 universities around the world and take 42 fellows every year who are put in teams of 3-4 lead by 6 experienced mentors from industry and academia and 3 project managers. We put out a call for proposal for projects and select ~12 projects from over 50 proposals that are scoped by our team at the Center for Data Science and Public Policy at the University of Chicago to be ready to go before the start of the summer. The program typically runs from end of May to end of August in downtown Chicago.

### **Expansion and Replication**

Our program has inspired and helped launch several related initiatives in organizations across the US and internationally. Georgia Tech and University of Washington launched similarly designed Data Science for Social Good programs over the last 2 years and IBM Research launched a similar fellowship program. Currently, NYU and Princeton are evaluating starting a similar program and NOVA School of Business and Economics in Portugal is launching a DSSG-Europe program next summer.

### **Sponsorship Opportunities:**

The summer program costs ~\$1.2M which includes the costs for the summer as well as the costs for staff during the year to solicit and scope projects, create data use agreements, perform data extraction and data audits, and create training materials, etc. We are open to the scope of projects we would do and can be more focused on your priorities including:

- Certain regions/cities/states in the US as well as globally
- Certain issue areas (health, education, advocacy, criminal justice, public safety, Environment, etc.)
- Certain project partners

We have several levels of support opportunities available:

- **Fund the entire program for Summer 2017** - Sponsorship Amount: \$1.2M
- **Fund an Issue Area or a Regional Focus for Summer 2017** - Sponsorship Amount: \$300k
- **Fund a Project for 2017** - Sponsorship Amount: \$100k

We also have smaller supporting opportunities available. Please contact us at [datascience@uchicago.edu](mailto:datascience@uchicago.edu) if you would like more details.

For more information: <http://dssg.uchicago.edu>

List of Projects: <https://dssg.uchicago.edu/projects/>

Video of some of our project partners: <https://www.youtube.com/watch?v=94SgQ58g2Mk>

Video highlighting some projects from 2015: <https://www.youtube.com/watch?v=k0iP6egQ1Uk>