UNIVERSITY of WASHINGTON

eScience Institute

ADVANCING DATA-INTENSIVE DISCOVERY IN ALL FIELDS

Data Science for Social Good

Sarah Stone - co-Executive Director, eScience Institute

CASCADIA URBAN ANALYTICS COOPERATIVE

GORDON AND BETTY MOORE FOUNDATION

Microsoft

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Washington Research FOUNDATION

UNIVERSITY of WASHINGTON

eScience Institute

DATA SCIENCE FOR SOCIAL GOOD

2017 DSSG Student Fellows

website - http://escience.washington.edu/dssg/

@uwescience #DSSG2017

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DATA SCIENCE FOR SOCIAL GOOD

<u>Goal:</u> This program brings together students and researchers with data science and domain expertise to work on focused, collaborative projects for societal benefit.

Modeled after similar programs at the University of Chicago and Georgia Tech with elements from our own Data Science Incubator.

Through the Cascadia Urban Analytics Cooperative (CUAC) we worked with the University of British Columbia to set up their pilot DSSG program in 2017

Project Teams

4 projects supported each summer

Each team consists of:

Project Leads (1-2)

eScience Data Scientist Leads (1-2)

DSSG Student Fellows (4)

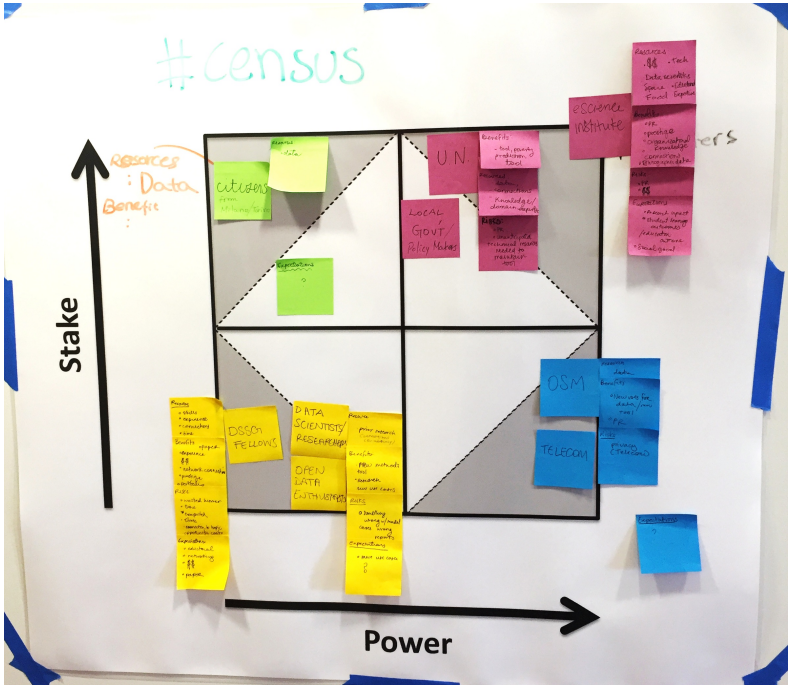
Data Science Ethnographers

- study the culture & practice of data science
- provide programmatic insight
- stakeholder identification/collaboration
- data science ethics

Brittany Fiore-Gartland
eScience Director of Data Science Ethnography

Anissa Tanweer

Graduate Student, Communications



Project Proposals – call is NOW OPEN!

We invite short proposals for 10-week data-intensive research projects that have an applied social good dimension.

=> take advantage of drop-in office hours to hone/discuss project ideas

Proposals may be submitted by academic researchers, public agencies, non-profit entities, and industry.

Project Proposals - what we were looking for:

- strong science, strong methods
- availability, commitment – **Project Proposer => Project Lead**
- clarity and shovel-readiness
- capacity for measurable outcomes
- sustained engagement

Project criteria

- strong science, strong methods
- new directions, new questions
- availability, engagement, commitment
- “do only what we can only do together”
  - with apologies to Djikstra
- alignment with sponsor and program goals
- clarity and shovel-readiness
- capacity for measurable outcomes and sustained engagement
- properly scoped, such that significant progress can be made in the summer time frame

Domain Areas of Interest

- Poverty, equality, income
- Crime, justice, legal
- Housing
- Public Education
- City planning
- Transportation
- Hazards / Resilience
- Utilities
- Economics

seattle.gov

Urban@UW
an initiative of the Office of Research + COMOTION

Socrata

Technical Areas of Interest

- new platforms, new algorithms, new methods, new datasets
- working with large, heterogeneous, and noisy datasets
- scalable analytics and predictive models
- interactive visualization
- code review, publishing, and reproducibility
- online teaching materials, tutorials

Project Lead (PL) Expectations

- PL submits the proposal
- Together with the Data Scientist Leads, the PL manages the student team setting expectations, goals, timelines
- PL bears primary responsibility for project design and execution
- **Project Leads commit to being in Studio at least 16 hours/week**
  - Project leads and data scientists should coordinate schedules
- Arrange a fieldtrip for the project team to appropriate stakeholder

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Each team consists of:

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eScience Data Scientist Leads (1 primary, 1 secondary)

DSSG Student Fellows (4)

Stakeholders

Student Fellow Selection Criteria

40 hours per week for 10 weeks, $6500 stipend

- 16 DSSG Fellows selected
- Current student, advanced undergrad or graduate
  - Spring graduates okay
- Educational experience, GPA
- Technical/Analytical experience
- Demonstrated interest in “social good” through research projects, paid and/or volunteer experience
- Experience with collaborative projects

Program Activities

software carpentry

Project expectations at end of summer

- Online data product delivered
  - an online visualization, a public library on github
- Findings summarized in a brief online report
- All code hosted on github
- Acknowledgment on papers resulting from the project
- Findings presented to the eScience and broader community via Final Presentations

2018 DSSG Timeline

January 8th – Student Fellow applications open NOW
February 12th – Student Fellow applications close

January 15th – Call for proposals open NOW
January 26th – Proposal info session
February 25th – Proposals due online by EOD
=> light weight ~2 page proposal
March 19th – Project short-list notification

June 11th – Program kickoff
- 1st & 2nd weeks the focus is on tutorials, skill building, and project introduction

August 17th – Final Day