



Registration Website (ChallengePost): <http://bigdataforsandiego.challengepost.com/>

Main website: Github (data/tools): <http://bigdataforsandiego.github.io/>

Hacking Big Data and Open Data in San Diego for Tackling the Challenges in Water Conservation, Disaster Response, and Crime Monitoring!

The Big Data Hackathon for San Diego aims to promote the development of data science and information technology solutions for San Diego on important civic issues.

Where: *San Diego State University Campus. Peterson Gym Room 153*

Dates:

- Week 1: Oct. 3 (9am - 5pm), Oct. 4 (9am - 4pm), 2015 (First Round awards)
- Week 2: Oct. 10 (10am - 2pm), 2015 (Second Round awards)

Themes: The Hackathon will focus on three themes: Water Drought and Conservation, Crime Analysis and Wildfire Alerts and Responses. See the submission guidelines for more details.

Who should participate? Anyone is welcome to participate! Students, engineers, developers, programmers, journalists, scientists, public officials, and community members are just a few people who may find this Big Data event of interest.

Prizes: Prizes will be awarded for the best proposals, as well as the best overall projects.

Best Proposals

- Most innovative idea: \$200
- Strongest teamwork: \$200

Best Overall Projects

- 1st Prize: \$1,200
- 2nd Prize: \$600
- 3rd Prize: \$300

Cost: This Hackathon is free! Bring your ingenuity, creativity, imagination, a laptop and a charger!

Expected Outcomes:

1. To identify important civic issues in the San Diego region that can be potentially explored or solved through the lens of Big Data Science and Software Development.
2. To build a community of educators, students and the wider San Diego community around a specific civic issue that has far-reaching impacts for the future development of Open Government and Open Data in San Diego.
3. To contribute to the initiative of the Big Data Science Education Program (certificate programs and a possible MS program at SDSU).
4. **To encourage Hispanic and minority students to learn computer science and programming skills for their future careers (SDSU is a Hispanic-serving Institute).**

Co-hosted by the Center for Human Dynamics in the Mobile Age (HDMA), the Lavin Entrepreneurship Center, and the Center for Climate and Sustainability Studies (C2S2).

Co-hosted by SDSU Student Associations (RSO):

- **The Society of Statisticians & Actuaries (Katy Torres and Jonathan Navarrete)**
- **GGSA (Geography Graduate Student Association) (Emanuel Story)**
- **Supporting Women in Geography (SWIG) (Lydia Wood)**
- **ACM student chapter (Isha Gautam and Sherman Marshall)**
- **The Student Chapter of the Society of Professional Journalists**

SDSU Coordinators: **Amy Schmitz Weiss (lead)** (aschmitz@mail.sdsu.edu, Associate Professor in the School of Journalism & Media Studies, SDSU), **Ming-Hsiang (Ming) Tsou** (mtsou@mail.sdsu.edu, Professor in Geography and Director of Center for Human Dynamics in the Mobile Age), **Bernhard Schroeder** (bschroeder@mail.sdsu.edu, Lavin Entrepreneurship Center), **Director Gonzalo Urrutia** (gonzalo@sandiegodata.org), Society of Statisticians & Actuaries at SDSU. **Roger Whitney** (rwhitney@mail.sdsu.edu), Associate Professor in Department of Computer Science, **Atsushi Nara** (anara@mail.sdsu.edu), Assistant Professor in Geography and the HDMA center.

Partner Sponsors/Organizers:

- Eric Busboom, Executive director of San Diego Regional Data Library
- Xavier Leonard and Jerry Hall, Open San Diego.
- Jeff Johnson, OpenGeo.
- Maksim Pecherskiy, Chief Data Officer at the City of San Diego.
- David Lindsay, the County of San Diego.
- Robert Barreras, Emergency Services Coordinator, County of San Diego Office of Emergency Services

IP ownership: What is the Intellectual Property of Codes and Apps created within this Hackathon? All outputs and codes should be saved in the San Diego Big Data Hackathon Github Repositories, which are Open Source with Creative Commons Licenses. There is enormous value to the San Diego community by having an open repository of these outputs and codes.

Challenging Questions in Key Themes: water conservation, disaster response, and crime monitoring.

1. Water Conservation and Drought:

- How can Californians know about their water intake and how to conserve during the drought?
- Which day (weekday or weekend) or which areas (zipcode or street block) are the highest water usage?
- What are the reasons that people do not follow the mandatory water use restrictions in San Diego <http://www.sandiego.gov/water/conservation/drought/prohibitions.shtml>
- Where are the citations of water use violation in San Diego?
<http://www.sandiego.gov/water/conservation/drought/enforcement.shtml>

2. Disaster Response and Assistance

- In what ways can Californians be informed and be able to mobilize when the next disaster happens?
- How can we provide and share useful information for our local community during and after the disaster events (wildfires, floods, and earthquakes)? (like Craigslist services?)
- Where are the available shelters or local assistance center (LAC) for my family during disaster events? How long will it take for my family to move to the nearby shelters during the disaster?

3. Crime Monitoring and Analysis:

- How can Californians know about the various crimes in their neighborhoods and how to curate and share this information?
- What are the major crime activities in my neighborhood recently (last two weeks)?
- Compared to last month or last year, will my neighborhood crime rate increase or decrease?
- Is it safe to go out in the late evening in my areas? When did the most crime activities happen in my area?

Open Data Resource

General San Diego Open Data:

1. SANDAG DataSurfer (NEW!): <http://sandag.vinasource.com/>
2. OpenDSD: <http://www.sandiego.gov/development-services/opendsd/>
3. SANDAG GIS databases online:
<http://www.sandag.org/index.asp?subclassid=100&fuseaction=home.subclasshome>
4. SANDAG Data Warehouse: <http://profilewarehouse.sandag.org/>
5. SANDAG Profile Warehouse: <http://profilewarehouse.sandag.org/>
6. San Diego Regional Data Library Repository: <http://data.sandiegodata.org/>
7. ArcGIS online SanGIS parcel Lookup: <http://sdgis.sandag.org/>
8. County of San Diego website – SDCountyInFocus :
<http://www.sandiegocounty.gov/content/sdc/info.html>
9. County of San Diego Land Use & Environment Group :
<http://www.civicdata.com/dataset?organization=cosd-c997d807-9e5c>

Domain-specific Data Sources:

Water Drought/Conservation,

- Equinox Center <http://www.equinoxcenter.org/>
- <http://droughtmonitor.unl.edu/MapsAndData/GISData.aspx>
- USGS Water resources: <http://water.usgs.gov/maps.html>
- California drought, visualized with open data <https://github.com/USGS-CIDA/CIDA-Viz>
- NOAA Climate Prediction Center GIS Data:
http://www.cpc.ncep.noaa.gov/products/GIS/GIS_DATA/
- San Diego Water Consumption Data?
- San Diego Coast Keeper Data?

Disaster Response/Assistance (HDMA center will provide).

- Open FEMA Data Feeds: <https://www.fema.gov/data-feeds>
- NOAA National Weather Services CAP (Common Alerting Protocol):
<http://alerts.weather.gov/cap/wwaatmget.php?x=CAC073&y=1>
- San Diego County Emergency Map: <http://sdcountyemergency.com/maps/>
- San Diego County Emergency Data Feed:
http://services1.arcgis.com/1vlhDJwtG5eNmiqX/ArcGIS/rest/services/public_features/FeatureServer
- USGS Data Service:
<http://viewer.nationalmap.gov/example/services/serviceList.html>
- Live Feeds (including Earthquake or wildfire) hosted by ArcGIS:
<http://tmservices1.esri.com/arcgis/rest/services/LiveFeeds>

Crime Monitor/Prevention (San Diego Regional Data Library):

- San Diego Region Crime Incidents 2007 – 2013
http://data.sandiegodata.org/dataset/clarinova_com-crime-incidents-casnd-7ba4-extract
- The Automated Regional Justice Information System (SANDAG):
<http://www.sandag.org/index.asp?subclassid=21&fuseaction=home.subclasshome>
- SANDAG: Download the most recent 180 days of San Diego regional crime data as displayed on crimemapping.com. The data are in a comma separated value (.csv) table and will be refreshed weekly on Wednesday.
<http://www.sandag.org/index.asp?classid=14&subclassid=21&projectid=446&fuseaction=projects.detail>
- <http://www.crimemapping.com/> (the Omega Group).
- The alcohol licensing information is freely available and updated every Wednesday. The source is here: (see Weekly / Data Export)
<http://www.abc.ca.gov/datport/SubscrMenu.asp>.