Archaeology & Digital Humanities

The D.I.R.T. on Big Data

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ARCHAEOLOGY IS BIG DATA

User experience design in archaeology and cultural heritage

Designing Interfaces
Archaeology & Digital Humanities

Collaborative & Interdisciplinary
Quantitative & Qualitative
Human-centered
Place-based
Community-facing
Design-oriented

WSU archaeology students share their findings from Roosevelt Park, Corktown with the public.
D.I.R.T.

- Big Data
- Big Ideas
- Big Research
- Big Teaching

WSU archaeology students on the Unearthing Detroit project share finds with the public at the Michigan State University Science Fest, Belle Isle
Big Data

What happened on the "shop floor"?
Unearthing Detroit Project
Excavations at Roosevelt Park, Corktown

Michigan Central & Future Location of Roosevelt Park, 1915
(Detroit Saturday Evening)
Macro to Microscale Spatial & Temporal Data

City  |  Neighborhood  |  Property  |  Household  |  Individuals  |  Objects  |  Micro-artifacts  |  Soils

Corktown 1906 (l), 1918 (r)  
Roosevelt Park 1918-1921  
Train Station 1913
Sarah Foy, aged 22, died of lung disease in 1907.

Sanborn Map, 1915

Foy Family household 1903-1917

Excavation

Macro to Microscale

Geochemistry

Archival Research

Airborne particulates

Sanborn Map, 1915

Artifact Analysis

Musterole: medicine to treat respiratory ailments, ca. 1906
Ethnic Layers of Detroit

- Experiencing place through digital storytelling
- Using digital humanities to interpret, share, teach and design human-centered & place-based Big Data

Types of Digital Stories
- Built environment (buildings, bridges, etc)
- Landscapes / neighborhoods
- Personal stories
- Ephemera (festivals, parades, etc)
- Absences
- Material culture
Scaling Up and Out

The Unearthing Detroit Project’s Archaeology graduate students featured at the UM3 Detroit symposium, University of Michigan Ann Arbor, 2017

Ethnic Layers of Detroit project co-directors: Alina Klin, Laura Kline, Sangeetha Gopalakrishnan, Krysta Ryzewski, Julie Koehler, and Kim Schroeder (not pictured)
Big Ideas
Big Research
**SAUS: Spatial Analytics in Urban Settings**

Synthesizing Big Data digitally to address past, present, and future challenges in urban settings with respect to *environmental*, *cultural*, and *historical* issues.

Outcomes: engage with a wide variety of stakeholders, from local neighborhood residents to government agencies, in order to affect positive transformations in cities.

- **30,000 artifacts**
- **26 features excavated**
- **Sites across 9 city blocks**

WSU Anthropology students excavate the Ren Cen site, 1973-74 (artifacts housed on campus in the Grosscup Museum of Anthropology)

**HGIS** [Historical Geographic Information Systems]
visualizing large historical data sets in space

**HSDI** [Historical Spatial Data Infrastructure]
interactive data infrastructure (geographic data, users, metadata, tools)

**Deep Maps**
flexible inquiry, research questions, participatory, anchored in place, space, people. Citizen historians, citizen scientists
SAUS: Spatial Analytics in Urban Settings

Experts in:
- Archaeology & Anthropology
- Urban Planning & Design
- Geographic Information Systems
- Computer Science and Engineering
- Archival, Library & Information Sciences
- Public History
- Foreign Language
- Instructional Design
- Environmental Sciences
- Communications

Competencies Needed:
- HGIS / HSDI
- Design
- Preservation / Heritage
- Multimedia Development
- Digital Archives
- Database Management
- Museum Collections

Archaeological sites
Environmental review / Historic land-use study areas
Big Teaching
Big Teaching
& small(er) training?

Teaching Big Classes
Global Detroit
Digital Storytelling Class
History Communication
Business Anthropology
Design Studies
Global Health
Ecology and the Environment
Geology and the Environment
Urban Studies
Computer Science

Teaching Competencies
Learning by Doing
Qualitative Research Methods
Anthropology Practicum (industry partnerships)
Geographic Information Systems
Archaeology Lab Methods / Fieldwork
Museum Studies
Cultural Resource Management
Public History
Oral History
Foreign Languages
Digital Archival Management
Community Engagement
T-RUST Courses

Ethnic Layers of Detroit project hosts a digital storytelling workshop for students and community partners
Who Cares about Big Data?

- Who does our data serve?
- How can we make Big Data research & training accessible, accountable, sustainable?
- What can applied social sciences and digital humanities bring to Big Data?

Archaeology is Big Data, A Foundation for:
- working with communities
- revitalizing and redesign cities
- examining health issues in diachronic view
- understanding environmental changes
- using the past to inform future-making
- boosting tourism
- promoting development and investment
- inspiring pride of place
- informing tech innovation
- educating students

Unearthing Detroit project team introduces archaeological science to local middle school students via the Time Jumpers program.
Digital Humanities & Activism: Communities in Motion

2018 Schedule

Friday, September 21st

All Network Detroit 2018 activities in Room 91 of Manoogian Hall unless otherwise noted

8:30-9:00
Special Thanks

Office of the Provost, Wayne State University
Department of Anthropology, Wayne State University
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Ethnic Layers of Detroit Project
Office of the State Archaeologist, SHPO, Lansing