Into the Dataspace

Data Science Services on the Ground

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Story Structure

This happened
Then this happened
Then this happened
Moment of reflection!
Story Structure

This happened
Then this happened
Then this happened
Evaluation
Moment of reflection!
Hunt Library (south)  

Hill Library (north)
Hunt Library Visualization Spaces

January 2013
Change the way people think about academic libraries and inspire others to build better ones.
Visualization Services Team

2014–2017

Interdepartmental team for mostly visualization space-centric support at first, builds new services like data visualization workshops & consults.
Data Visualization Workshop Series

January 2016

Transformed our definition of “visualization” from projectors and screens to support for data science.
Data & Visualization Services Department

February 2018
2 impending spaces
High service demand
Formed with members of Visualization Services Team et. al.
6 FTE, 7 librarians
Data & Visualization Services Department

FY19 evaluation
577 help online/email requests
42% grad students
6+ hours/week in consultations
Data & Visualization Services Department

Elements of Visualization Design
Graphing in Excel
Beginning Tableau
Intermediate Tableau
Visualize Survey Data in Tableau
Mapping in Tableau
Introduction to Humanitarian Mapping and OpenStreetMap
GIS-powered Data Visualization with Insights
Mapping and Geospatial Visualization in QGIS
Coding 3D Landscapes of Sound
Visualizing Sound with Code
An Introduction to Data Sonification
Data Cleaning with Python
Integrating APIs in Python
Beginning R
Data Visualization with R
R for Data Science: Importing Data
R for Data Science: Data joins and tidying
R for Data Science: Graphing
R for Data Science: Data Transformation
R for Data Science: Functions
R for Data Science: Vectors
R for Data Science: Loops and Map Functions
R for Data Science: Modeling
R for Data Science: Reporting

FY19 evaluation
948 workshop attendees (59% graduates)
22 course instruction sessions
17 campus unit workshops
Reflection
Profs say undergrads need these skills but they are not as likely as graduate students to come to librarians through formal help channels e.g., web forms & workshops
Data & Visualization Services Department

Reflection
Project work is essential for keeping tech skills fresh but how do we carve out time and set expectations for collaboration?
Hunt Library Dataspace Grant

October 2017

~$117k from private foundation grant for a “data science commons” to repurpose lounge seating and build undergrad skills
Faster processors, more RAM, the right software to do data analysis, visualization, and programming with quantitative, image, and time series data.
Hunt Library Dataspace Opens

August 2018

Consolidates and increases advanced computing at Hunt Library

Provides new data & visualization software stack

Killer assessment plan
Hunt Library Dataspace Opens

Evaluation
8,311 logins
1.4x more use than general computing
Frustration re: computer availability
Yay laptop stations
Hunt Library Dataspace Opens

Evaluation
Undergrads 51% of logins
72% learned about by walking by
Use reflects College proximity
Hunt Library Dataspace Opens

Evaluation
More of everything:
Computers
Whiteboards
Laptop stations
Bigger space
Options for group work
Data Science Consultants

FY19
Hired 11 graduate Data Science Consultants from variety of STEM fields
Peer to peer learning
Data Science Consultant Expertise Areas

Python/Keras
R
MATLAB
Excel
SQL
Tableau
Qualitative data
NVivo
Machine learning
PySpark
Julia
Google Cloud
SAS
Stata
Graphing
Statistics
Data Science Consultants

First Year Evaluation

1520 reference transactions

Students satisfied with support from DSCs
Data Science Consultants

Reflections
Hire for education passion and good customer service skills, not just tech skills.
Can be difficult to manage students smarter than you.
D. H. Hill Jr. Library Data Point

January 2019

Pop-up consultation table to serve main campus patrons (social science / humanities)
D. H. Hill Jr. Library Data Point

1st Semester evaluation
428 reference requests in 1st semester
54% undergrad
37% graduate
D. H. Hill Jr. Library Data Point

Reflection

Invaluable to get experience managing two service points at different libraries, e.g., website representation, student scheduling, gauging needs.
D. H. Hill Jr. Library Renovation

August 2020
$15.9M
Renovate floors 2 & 3
Major work on ground, 1 & 4
390 new seats
~40k gross square ft
Opens August 2020
Data Experience Lab

August 2020

Like a makerspace for data science and digital scholarship

1741 ft²

783 ft²
Data Experience Lab

Evaluation
Undergrads don’t know what a Data Experience Lab is or ‘digital scholarship.’ BUT we have high confidence that services will be used and successful.
Data Experience Lab

Reflections

How do you future proof a plan for ~2500 ft²?

How do we engage with more sponsored research?
Conclusion

2013-2020
7 year arc that started with visualization spaces in Hunt and became data science and digital scholarship support at Hill
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SOURCES/RESOURCES
NCSU Libraries Digital and Data Science Skills Workshops:
Service One-Pager Template:
https://docs.google.com/document/d/1lqSJMTPfJ4AJGJRROvxVn_94E4I-5DXkeX21BISfR5k/edit?usp=sharing
Hill Library Renovation Website: https://www.lib.ncsu.edu/renovation