

NTIA Digital Nation Data Analysis and Visualization

UW iSchool Capstone Project

Janani Kumar
Nan Xiao
Shiyi Luo
MSIM 2018

PROJECT DESCRIPTION



NTIA's Digital Nation Dataset is rich collection of data obtained by surveying people across America on their computer and internet usage. The team was tasked to understand and derive insights from the dataset that will help policy makers make decisions best tailored to the needs of the users. Before we set out explore the data, we looked at the mission statements of NTIA and BroadBand USA to ask questions that will help them achieve their goals.

PROJECT DELIVERABLES

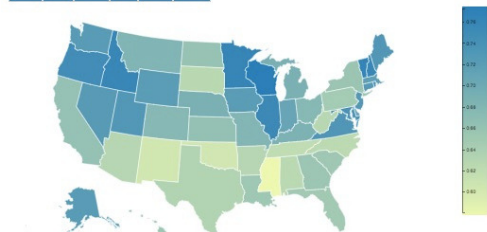
- State Broadband Profiles: Create profiles for computer and internet use in each state, and present the information using compelling visuals and infographics that can inform policy at the state level.
- Find a New Story: Uncover interesting patterns about Computer and Internet use in America in the tremendous dataset.
- Make it Repeatable: Develop necessary tools, code, and documentation so that people can continue the work after project is complete.

Digital Nation Data Visualization

Section I: Internet Usage by State

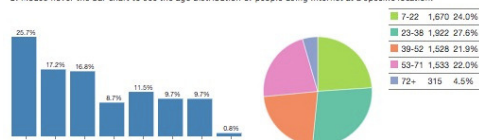
Internet Usage By Locations

Home Work Travel Cafe Public School



Section II: Different Locations of Using Internet with Age Distribution in Washington State

1. Mouse hover the pie chart to see percentages of people using Internet at each location in an age group.
2. Mouse hover the bar chart to see the age distribution of people using Internet at a specific location.

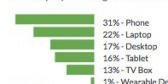


(Generation Z: 7-22, Millennials: 23-38, Generation X: 39-52, Baby Boomers: 53-71, Generation V: 72+)

Data from 2015 NTIA Digital Nation Data

Digital Nation Washington State Profile

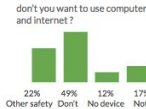
Devices people use to get on Internet:



What do you use computer and internet for?



Why don't you want to use computer and internet?



Demographics

Profile of Internet Households

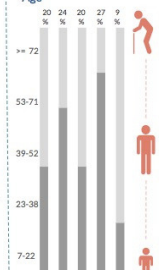
Gender Household Size



Income and Education Level



Age



Where do you usually use internet?

At Home or Work During Travel In School or Library In Other Places

43% 17% 18% 22%

Deliverable Links:

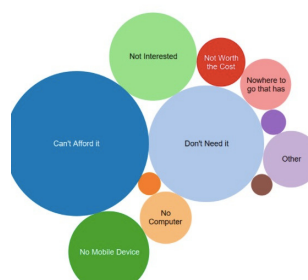
- <https://nannxiao.github.io/ntia>

- <https://public.tableau.com/profile/janani.kumar#!/vizhome/DataStories>

NEXT STEPS AND RECOMMENDATION

- Incorporate feedback and enrich explorations.
- Thinking about what is not there in the data.
- Iterate on the visualization principles followed.

- Summary first, details on demand.
- Less in memory, more on screen.
- Feature Integration is important.



TALK TO US

jkumar@uw.edu
nanxiao@uw.edu
luos9@uw.edu