GUIDELINES AND LEARNINGS FROM COLORADO

TEST KITCHEN FOR GOLD STANDARD FRAUD

Table of Contents

Table of Contents Continued

STATE DATA

State Data Needed

- Voter Registration File *
- Ballots Cast File *
- Rejected Ballots File *
- Voter History File *
- State Demography Population Data over Time

*For the first 4 items: Check with your state's Secretary of State's office to inquire about obtaining this data
There is typically a steep cost to get this, so you may need to marshal funds

State Data Needed

Voter Registration File

- Contains voter information, including but not limited to:
  - Voter ID, name, precinct, residential address, mailing address, and registration date
- If possible, get file that is labeled the month following an election
  - This is due to lag in updating the electronic data and should align with voters who cast ballots in an election

State Data Needed

Ballots Cast File

- Contains voter ballot information, including but not limited to:
  - Voter ID, name, precinct, date ballot or vote was received
- If your state has mail in balloting, then they should track whether a ballot was received
  - For example, in CO we have a column labeled vote method. If a mail in ballot was not received and a person did not vote in person, it will be labeled NA
    - You will want to back these out of your data if you're interested in people who actually cast ballots

State Data Needed

Rejected Ballots File

- Contains voter ballot rejection information, including but not limited to:
  - Voter ID, name, reason ballot was rejected
  - If your state has a curing process that is tracked, there should be a file available
  - If you are trying to get at people whose ballots were counted, you'll want to exclude people on this list along with those that had a vote method = NA on the ballot cast file

State Data Needed

Voter History File

- Contains voter history information for each voter, including but not limited to:
  - Voter ID, name, date of election that was voted on, and name of election that was voted on
- Most states should have this file and it is necessary in order to calculate a voter opportunity score
  - A voter opportunity score will be discussed in later slides
  - Important information to help focus canvassing efforts once those are set up

State Data Needed

State Demography Population Data over Time

- Your state's demography office should have population by county available
  - You'll want to try and get at age ranges to calculate voting population by year
  - This helps as a comparison to any increase in voter rolls

ANALYTICS RESOURCES

Analytics Resources

Software

- Deep Dive Analytics
  - Preferred: R/Rstudio, Python, Power BI, SAS, etc.
  - Election Data Analyzer (EDA) – Excel - Works for up to 1MM voters
  - Works, but limits analysis: LibreOffice, or a similar program
- Walk List and Voter Log Processing
  - Excel, R/Rstudio, Python, Power BI, SAS, Election Data Analyzer (EDA) etc.

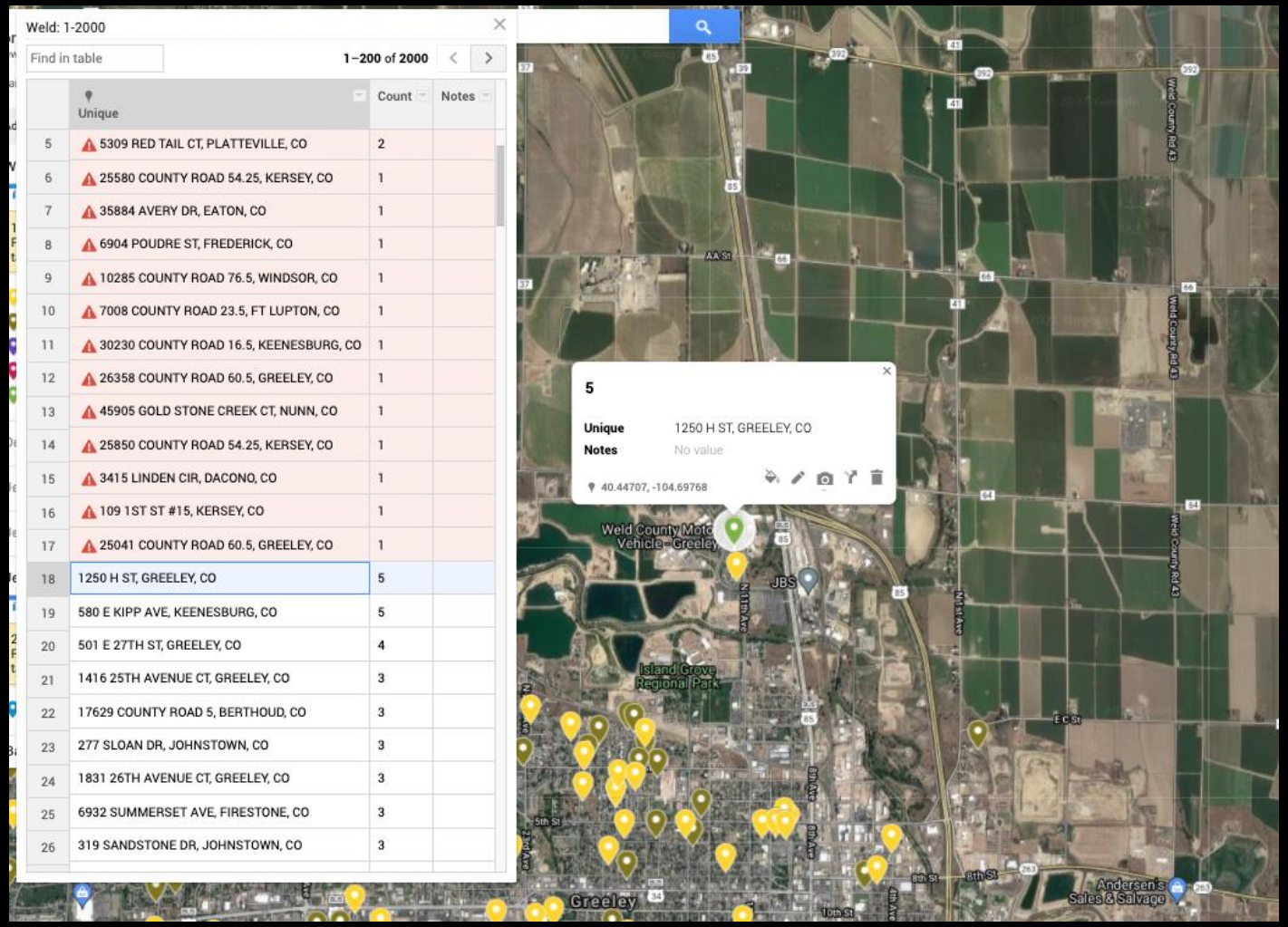
EDA Mapping Tool

Voters by Address

- Uses the voter registration file from the state
- EDA produces an Excel output file
- Import Excel into map
- Bad Address (red)
- Excessive voters at a residence
- Voters registered at illegal locations
- 15 sets of pivot tables of voter data

EDA FAQ

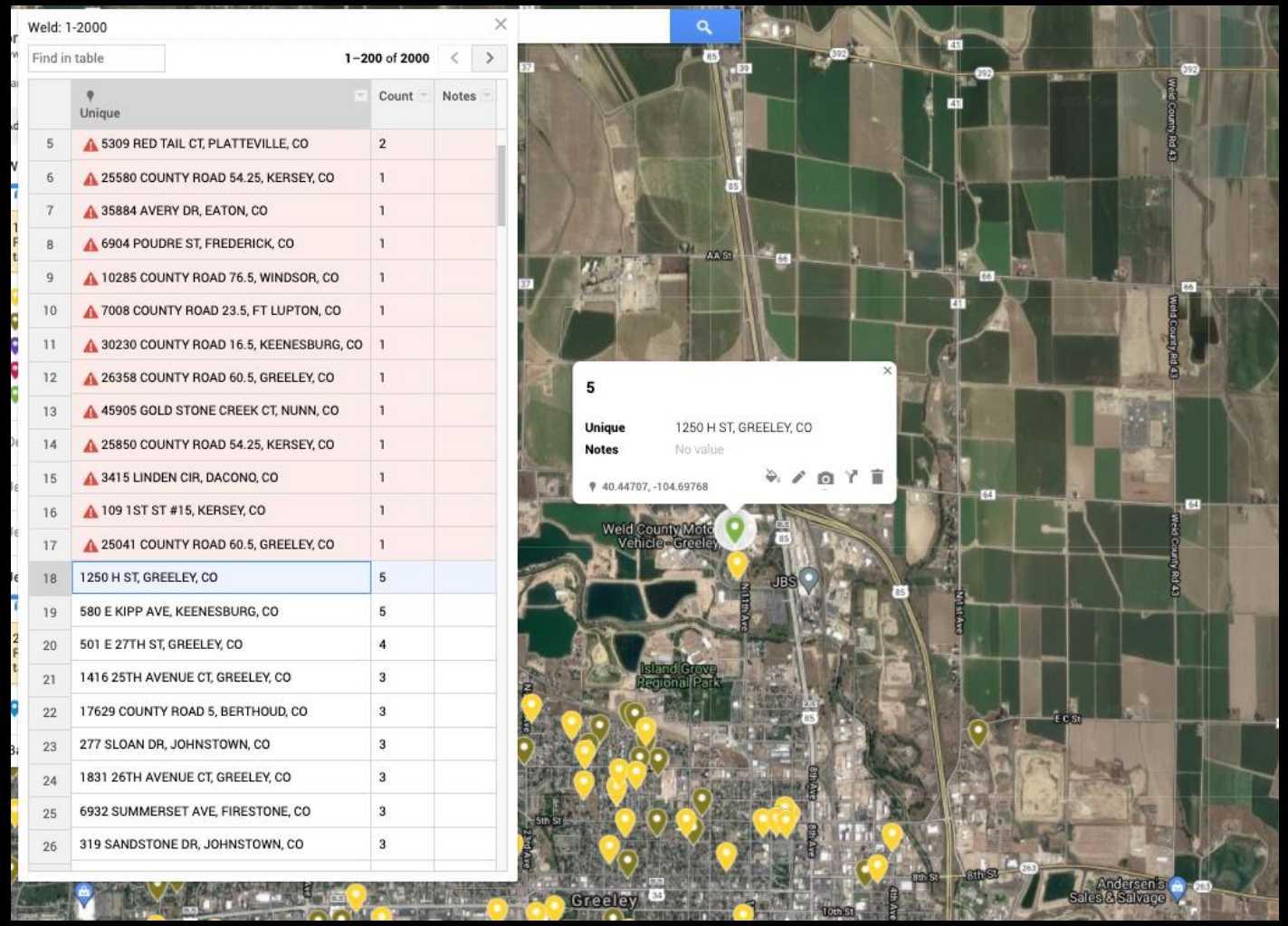
Election Data Analyzer Telegram Channel



EDA

How to Access It

- 3 ways to access via Telegram: @psigfredo, @M_EDA, or make a request on the public channel and @M_EDA will DM you.
- In all cases, @psigfredo is screening to ensure there is involvement with AFA and to filter out infiltrators.



EDA FAQ

Election Data Analyzer Telegram Channel

Analytics Resources
People

- Analytics
  - Preferred: Analytics professionals or people used to working with and analyzing data (especially large data sets)
    - Buzzwords people use: Data scientist, Analytics Professional, Business Intelligence Analyst/Professional
- Data Analyst
    - Excel skills (sorting, filtering, copy, paste)
    - EDA secure workbook generates pivot tables of registration data
    - EDA unique address with voter totals file can be imported to maps
- Software Developers and/or Database People
  - Very helpful to have someone that can create software and/or knows how to work with databases to help with automating the collection of data

TARGETING PRECINCTS

Targeting Precincts

Voter Opportunity Score – Theory and Requirements

- Theory
  - Phantom voters added to a registration list for the purpose of defrauding an election would have voted very little compared to all the opportunities they've had to vote (based on their age)

- Required Data
  - Voter History Data
    - Voter ID
    - Estimated age at time of election
    - All dates of votes

Targeting Precincts

Voter Opportunity Score – Calculation

- $Voter\ Opportunity\ Score = \frac{Number\ of\ times\ a\ voter\ has\ historically\ voted}{Total\ opportunities\ a\ voter\ has\ had\ to\ vote}$

  - $Total\ opportunities\ a\ voter\ has\ had\ to\ vote$
    - IF (Estimated Age – 17) > (Maximum Number Of Elections in Voter History File)
    - THEN (Maximum Number Of Elections in Voter History File)
    - ELSE (Estimated Age – 17)

- Lower score indicates a voter has voted infrequently compared to the opportunities they've had

- This formula can be rolled up at a precinct level to target initial precincts for canvassing
  - Replace numerator with the total number of times all voters in a precinct voted
  - Replace denominator with the total opportunities all voters in a precinct have had to vote

Targeting Precincts

Making Statistical Assertions

- If your goal is to be able to make statistical assertions about a county (e.g. x% of voters recorded that they either didn't vote or incorrectly had their ballot rejected), then you need to talk to a minimum number of voters based on a random sampling of county voters
- If you have a dual goal of collecting as many affidavits as possible while still being able to make statistical assertions about a county, then you can simulate random sampling by targeting the lowest and highest voter opportunity score precincts

Targeting Precincts

Minimum Number of Voters Talked To – Required Information

- You will need the following information to calculate the minimum sample size required to make statistical assertions about the problems in a county:
  - Desired Confidence Level (e.g. 90%, 95%, 99%, etc.)
  - Desired Margin of Error (e.g. 3%, 5%, 8%, etc.)
  - Standard Deviation of Voter Opportunity Scores in a county
    - Note: Colorado voter opportunity scores mirrored a Weibull distribution, therefore, data needed to be transformed into a normal distribution before a standard deviation could be calculated
      - If your scores exhibit a non-normal distribution, you can use a box-cox transformation to transform it

Targeting Precincts

Minimum Number of Voters Talked To – Calculation

- $$n = \frac{\frac{Z^2 * \sigma * (1-\sigma)}{e^2}}{1+\frac{(Z^2 * \sigma * (1-\sigma))}{e^2 * N}}$$

Where:

- Z = Z-score based on wanted confidence level
1. 90% Confidence = 1.645
2. 95% Confidence = 1.96
3. 99% Confidence = 2.58

- σ = Standard deviation of county voter opportunity score
1. Be sure to transform your data prior to calculating the standard deviation

- e = Margin of Error (MOE)
1. This is the error that is +/- of your point estimate
2. Example: 10% affidavit rate and your MOE is 3% (we are x% confident that the true affidavit rate is between 7% and 13%)

- N = Number of voters in a county

Targeting Precincts

Minimum Number of Voters Talked To – Calculation Example

- $n = \dfrac{\dfrac{2.58^2 * 0.14 * (1-0.14)}{0.03^2}}{1+\dfrac{(2.58^2 * 0.14 * (1-0.14))}{0.03^2 * 200{,}000}}$

- $n = \dfrac{891}{1.004452}$

- $n = \boxed{887}$

ABC County with 200,000 voters who cast a ballot.
We want a 99% confidence that the estimate of problems is within 3%. We've found that our transformed voter opportunity score standard deviation is 14%.

Targeting Precincts

Minimum Number of Voters To Canvass – Calculation Example

- Given that not every door knocked = a voter talked to, you should assume some sort of hit rate % to calculate the # of houses you'll need to actually canvas to hit your voter goals
  - Example: Assume only 20% of doors knocked = voters actually talked to and prior sample size needed is 887

    $n = 887 / 0.20$

    $n =$ 4,435 houses need to be canvassed

Targeting Precincts

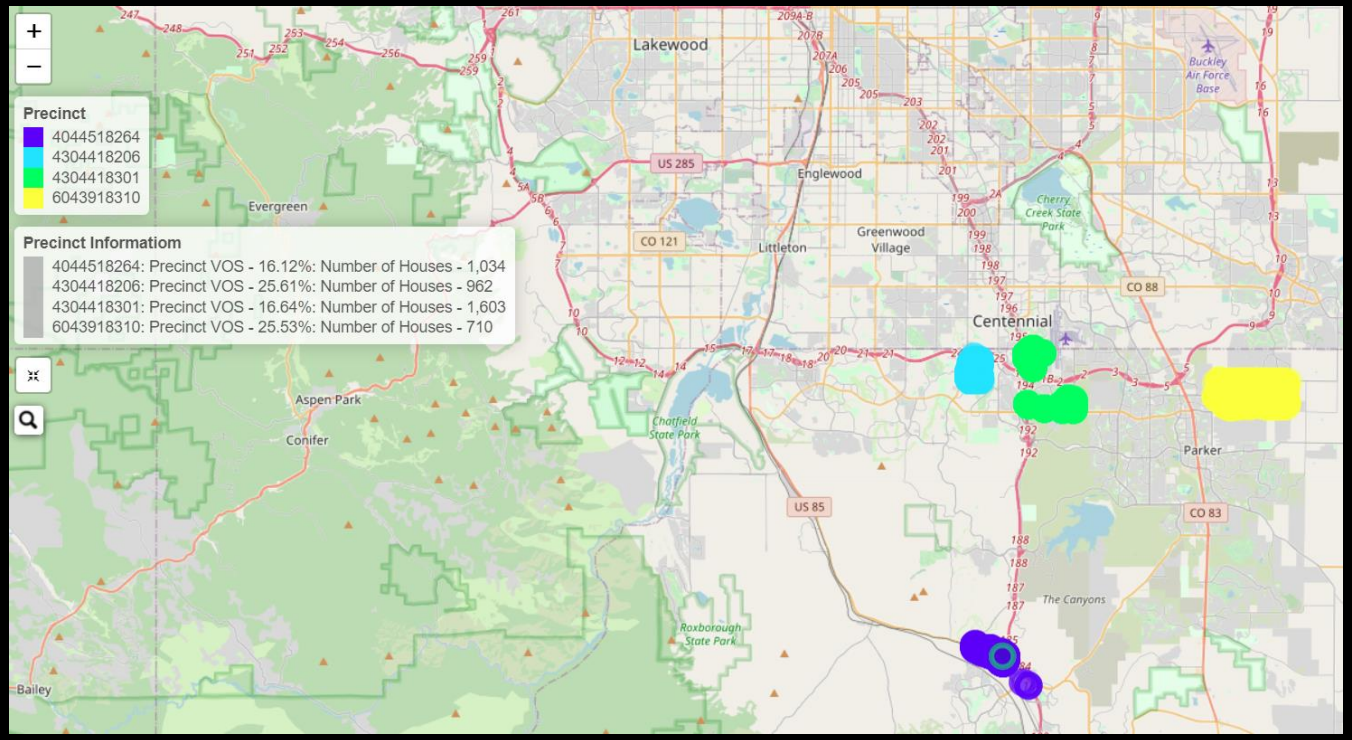
Minimum Number of Voters To Canvass

- How to divide the sample size when you have a dual goal of collecting as many affidavits as possible while still being able to make statistical assertions about a county
  - Sample Size / 2, with one half in the lowest voter opportunity score precincts and the other half in the highest voter opportunity score precincts

Targeting Precincts

Using a Map

- If you have an analytics resource that is used to working with geolocation data, you can create a map of the precincts identified to find those that are clustered



DATA ANALYSTS

Data Analysts

County Data Analysts

- Each county should have a data analyst contact to help with creating voter walk logs (to be explained in a later slide) and working on any additional analytics requests from a county with the help of the main Analytics team
  - Two methods:
  1. Single Data Analyst per county
  2. Assign multiple counties to a single Data Analyst

Data Analysts

County Data Analysts – Single County

- Pro:

1. Data Analyst will be very familiar with the nuances of a county and particular precincts and may be able to garner insights about the best precincts to walk

- Con:

1. Finding a Data Analyst can be time consuming as a lot of people are not comfortable working with spreadsheets and/or data
    - If there are a lot of counties in a state, it could be especially hard to find a good resource

Data Analysts

County Data Analysts – Multiple Counties

- Pro:

1. Data Analyst can scale the knowledge they learn from analytics requests and creating voter walk logs in one county to another county or counties

- Con:

1. Working on analytics requests and creating a voter walk log takes a lot of work, especially when it comes to targeting precincts where knowledge about the precinct would be very helpful
    1. Examples
        1. Precincts that may require some sort of security help due to the nature of the precinct
        2. Precincts that have college dorms. Typically have to get permission and students move around a lot

Data Analysts

Walk Logs

- Walk logs are specified questions asked of voters that can be done on paper (see example below) or app form

Precinct 5121921651 Batch 486-526 Date _____
Start Time _____ Stop Time _____ Number of doors knocked _____
Name of Walker _____ Number of doors answered _____
Name of Walker _____ Number of affidavits _____

#	V_ID	L_Name	F_Name	Age	Date Ballot Rcvd	VOS	Res_Address	Reg	Visit ?	Home ?	No resp ?	Vacnt Lot?	Cmrcl Lot?	Did they vote ?	Vote in Pers ?	Vote by Mail ?	Xtra Bal-lot ?	Voter did not send ballot	Voter does not live here	Other Voters ?	Party chng w/o auth ?	Othr ?	Pix ?	Affi-davit ?
1	[redacted]				10/26	19%	[redacted]	UA																
2					10/26	15%		R																
3					PER	2%		UA																
4					11/2	6%		R																
5					11/3	6%		UA																
6					11/2	100%		UA																
7					PER	25%		UA																
8					11/3	6%		R																
9					10/21	6%		UA																
10					10/21	24%		D																
11					10/16	12%		D																
12					10/21	17%		UA																
13					10/21	7%		UA																
14					10/19	31%		R																
15					10/19	26%		R																
16					10/16	2%		D																
17					10/16	2%		D																
18					10/16	6%		D																
19					11/3	7%		R																
20					PER	50%		R																
21					10/21	12%		UA																
22					11/1	6%		R																
23					10/29	38%		D																
24					10/14	14%		UA																
25					10/28	14%		D																
26					11/2	13%		R																
27					10/28	12%		UA																
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29					11/2	7%		R																
30					11/2	9%		R																
31					10/19	4%		R																
32					10/19	3%		R																
33					10/19	10%		D																
34					10/17	5%		R																
35					11/3	4%		UA																
36					10/24	100%		UA																
37					11/3	4%		R																
38					10/19	7%		UA																
39					10/22	14%		D																
40					10/22	12%		D																
41					10/30	100%		UA																

Data Analysts

Walk Logs – What to Collect

- At a minimum walk logs should contain the following:
  - Information to track the voter verification volunteer (needed for auditing purposes)
  - Information to track information received from a voter or to record a voter did not respond (see example header below for information that was requested in Colorado)

Precinct 5121921651 Batch 486-526 Date _____

Start Time _____ Stop Time _____ Number of doors knocked _____

Name of Walker _____ Number of doors answered _____

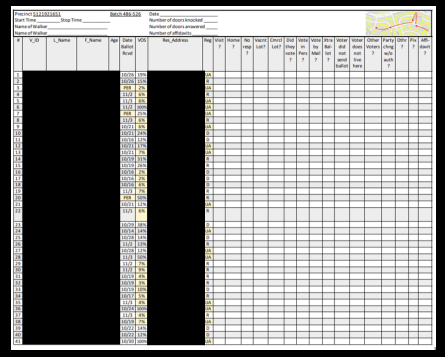
Name of Walker _____ Number of affidavits _____

#	V_ID	L_Name	F_Name	Age	Date Ballot Rcvd	VOS	Res_Address	Reg	Visit ?	Home ?	No resp ?	Vacnt Lot?	Cmrcl Lot?	Did they vote ?	Vote in Pers ?	Vote by Mail ?	Xtra Bal-lot ?	Voter did not send ballot	Voter does not live here	Other Voters ?	Party chng w/o auth ?	Othr ?	Pix ?	Affi-davit ?

Data Analysts

Walk Logs – How to Collect

- Two methods to collect information from voters
  1. Paper



  2. App

Data Analysts

Walk Logs – Paper Collection

- Pros
    1. Allows for auditing of results collected against an electronic source (such as a database)
    2. Allows for paper legal inclusion if legal recourse is sought
    3. No doxing or security issues with volunteers
- Cons
    1. Creates the need for paper to be printed, scanned, and stored
    2. Limits the number of questions that can be asked due to physical limitations of paper
    3. Requires an OCR software to automate collection of data from paper to a database
        1. You can still have people help enter data into a spreadsheet, however, this is fraught with manual errors

Data Analysts

Walk Logs – App Collection

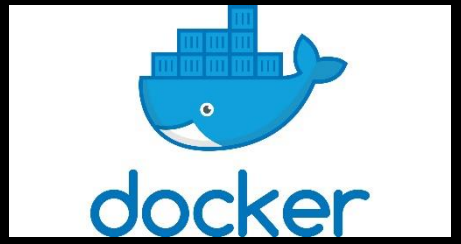
- Pros
    1. Allows for instantaneous collection of voter verification canvassing
    2. Doesn't technically limit the number of questions that can be asked
    3. Doesn't require the printing, scanning, or storing of paper
    4. Theoretically can be combined with a geolocation app to help when canvassing
- Cons
    1. If encryption and SSL is not present, does present a security issue as walkers can be doxed and information can be lost/erased by a party that seeks to limit the canvassing work
    2. Requires a method to be built in order to get auditable documentation if legal recourse is sought
    3. Older generation of volunteers may not be comfortable with an app and may not want to learn how to use an app

SOFTWARE AND/OR DATABASE DEVELOPERS

Software and/or Database Developers

Who To Look For

- It's helpful to have someone who can automate the collection of data into a database.
  - If you go the paper collection route for voter verification canvassing, someone that can create an OCR software will be helpful
    - You'll need to have a standard voter walk log format to automate
  - If you go the app route for voter verification canvassing, then having someone that can create the app along with someone that can help with automating the data collection from the app will be helpful
    - They'll also need to be skilled at setting up security for the app to protect volunteers from being doxed and information being deleted and/or lost



Software and/or Database Developers

What They Can Do

- Having someone with software development skills can greatly speed up any effort at standing up analytics in a state
- Depending on the software and database skill sets, you could automate much of the collection needed for both legal and analytics purposes

PARTING THOUGHTS

Parting Thoughts

Patriots Will Save This Country

- Regardless of your analytics skill level, you can help! It is up to patriots to take back our republic. This requires everyone, regardless of skill level, to join the fight and save our country

- **“These are the times that try men's souls.” - Thomas Paine, The American Crisis**
- **“The distinctions between Virginians, Pennsylvanians, New Yorkers, and New Englanders are no more. I Am Not A Virginian, But An American!” - Patrick Henry**
- **“A general dissolution of principles and manners will more surely overthrow the liberties of America than the whole force of the common enemy. While the people are virtuous they cannot be subdued; but when once they lose their virtue then will be ready to surrender their liberties to the first external or internal invader.” - Samuel Adams**
- **“[L]iberty must at all hazards be supported. We have a right to it, derived from our Maker. But if we had not, our fathers have earned and bought it for us, at the expense of their ease, their estates, their pleasure, and their blood.” – John Adams**
- **“Our cruel and unrelenting Enemy leaves us no choice but a brave resistance, or the most abject submission; this is all we can expect - We have therefore to resolve to conquer or die” - George Washington**