# Day one:

* Modelling is improving efficiency but its all statistics (expect 10% improved effect)
* Polling and canvassing are both more effective than modelling – polling is very high resolution and canvassing is very high resolution (both are much more expensive)
* Canvassing effect:
  + Local up to 22% persuasion
  + National election up to 2% persuasion
* Model most likely doners – and call them (makes sense if you don’t have resources to call all)
* What can modelling improve:
  + Canvassing
    - Ensure a positive experience for first timers.
    - If you cant canvas all, canvas the most important
* Polling is getting worse
  + Back in the days 1 out of 2 in US would do a phone survey
  + Recently it was 1 out of 200 (not a statistic representation)
  + Online is even worse (as people who has opted into surveys aren’t representable)
  + People have lost trust in “the system” don’t give away you’re data
  + If you want to know what people will do, use modelling.. if you want to know what people think use polling
* Model variables
  + BEST VARIABLE: Which newspaper do you subscribe to
  + Has a person been I a car accident (shows age but otherwise its useless)
  + ASK could we dig into variables
* Tools
  + targetsmartVAN.com (votebuilder.com)
  + ngpVAN.com
  + i-360.com
* How it works
  + All candidates can get access to targetsmart or votebuilder (integrated through VAN) witch has profiles (likelihood of voting for X or likelihood of thinking Y)
  + Each candidate gets access to voterprofiles (All individuals)
  + Data scientists can make new models by canvassing these individuals which will then be available in VAN for each individual (company like Clarity would charge 30.000$ to poll 5k people with 1 qustion, would include landline bot calls, sms and human calls)
* Individual leveled models (EU)
  + Members
  + To find volunteers, donations, other help
  + Build individual support models
* Geographic leveled models
  + Party Support
  + Party openness
  + Party opposition
  + Swing over time
    - Where are the places we are loosing more/less support than we would expect

# Second day

* Ideas
  + <https://lightgbm.readthedocs.io/en/stable/> alternative to XGBoost
  + <https://pypi.org/project/autots/> - alternative til LTST models (timeseries)
  + Simple Model Takeaways:
    - Make a model predicting the difference for a Party between 22 and 19
    - Look at the difference between the difference and prediction for each geo… this shows positive and negative outliers
    - Look at SHAP summary plot and correlations
    - Use PPS instead of Correlation  
      <https://www.kaggle.com/code/frtgnn/predictive-power-score-vs-correlation>   
      <https://medium.com/geekculture/predictive-power-score-implementation-in-python-70558bf91f45>

# Last day

* Venstre
  + Ideas
    - Model members to find new members
    - Model voters to find new members
    - Model both to find donaters
    - If mailvoters are separated at some point model separately so we can target people voting earlier that others
* Germany
  + Census agency
    - Every 10 years
    - Religion (Christian)
    - Houseing data (similar to BBR)
    - Age
* Lib Dems
  + All know
* Alde
  + All known
* New datasources
  + Scraping housing prices etc..
    - <https://www.zillow.com/>
    - find community definitions and housing prices
  + Moves
    - In USA it public information if somebody wants mail to be forwarded to the new address
    - When you move you usually got children or got retired or your spouse died… this is a space in life where you change who you vote for
  + School districts etc
    - Scrape school ratings, daycare ratings and figure out the quality of each for the nearest address
  + Scrape licenses
    - Barbers, plumbers, vvs, electri
    - Hunting or fishing licelses
  + Members
    - Combine houseprice with members to find out who is wealthy
    - Same sex people living together in expensive houses are good donators for Democrats
  + Open street map
    - Download entire file for Denmark as a shape
    - <https://download.geofabrik.de/europe.html>
  + Check out https://analystinstitute.org/