Hypothesis

- An assumption/hunch
- I hypothesize that

  I can make a roti /

  chapati.

Null Hypothesis

- Current state of being
- State of no change
- I can't make a roti

Alternate Hypothesis

- Desired outcome
- Claim
- I will make perfect roti

What does it take?

- Not too thick, not too thin!
- Not dry!
- Should be round!
- Should be soft!
- Not too brown!
- Not too white!

What to do?

- Practice!
- Make a roti a day!
- Called BOOTSTRAPPING!
- Bootstrapping helps gathering data points!

- Can I do it? How confident am I?
- What if I mess up? How much mess up ok?

DAY 1

- Shape is better (not a map :-P)
- It is too thick!

TRY AGAIN!

DAY 2

- Improved shape
- Not as thick as Day 1

TRY AGAIN!

DAY 3

- Nearly perfect shape
- Too thin as it got extra brown edges
- Looks sort of dry

TRY AGAIN!

DAY 4

- Drastic improvement
- Perfect shape
- Not much browning
- Perfect thickness
- Still looks a bit dry

TRY AGAIN!

DAY 5

- Added Ghee
- Problem Solved!

PERFECT ROTI!

What did I do?

- Defined Null and Alternate
- Defined Metrics
- Define significance level
- Bootstrapped - tried again and again!
- Evaluated performance

Am I being over-confident?

- Type 1 error : Rejection of True NULL
- I'm a pro at roti making in just 6 days!
- Can I sustain the performance?
- Can I make perfect rotis for the next:
  - Few days
  - Few weeks
  - Few months
  - Few years

Am I under-confident?

- Type 2 error : Acceptance of False Null Hypothesis
- I am such a loser! I can never cook!
- Am I?
- I made perfect rotis in 6 days,

  I should get better at it!

Black Box (to be continued)

- Hypothesis Tests