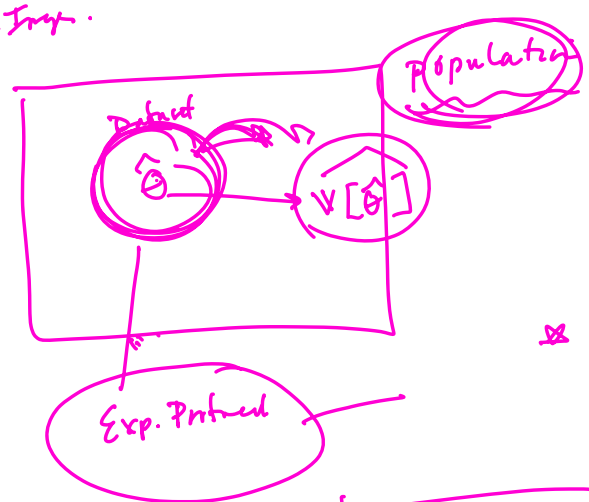
Leanna – statistics – VT
Akila – info sys. – UMBC
Mirco – physics + ML – UW, Mod.
Michelle – CS – OSU
Namrata – CS – OSU
David – CS – OSU
Sam – CS – OSU
Omar – Info Sys – UMBC

ML → Predictions "Uncertainty"

· uncertainties in model.
· physics simulation – sys. uncertainty
⇓
Bias

· Sample of data
↳

Imp.



Simulation

☆ Sensitivity Analysis

pros
do-able.

cons.
still limited to data.

own-it

BIO-CLIP ~ Foundation Model.

expensive fixed

so

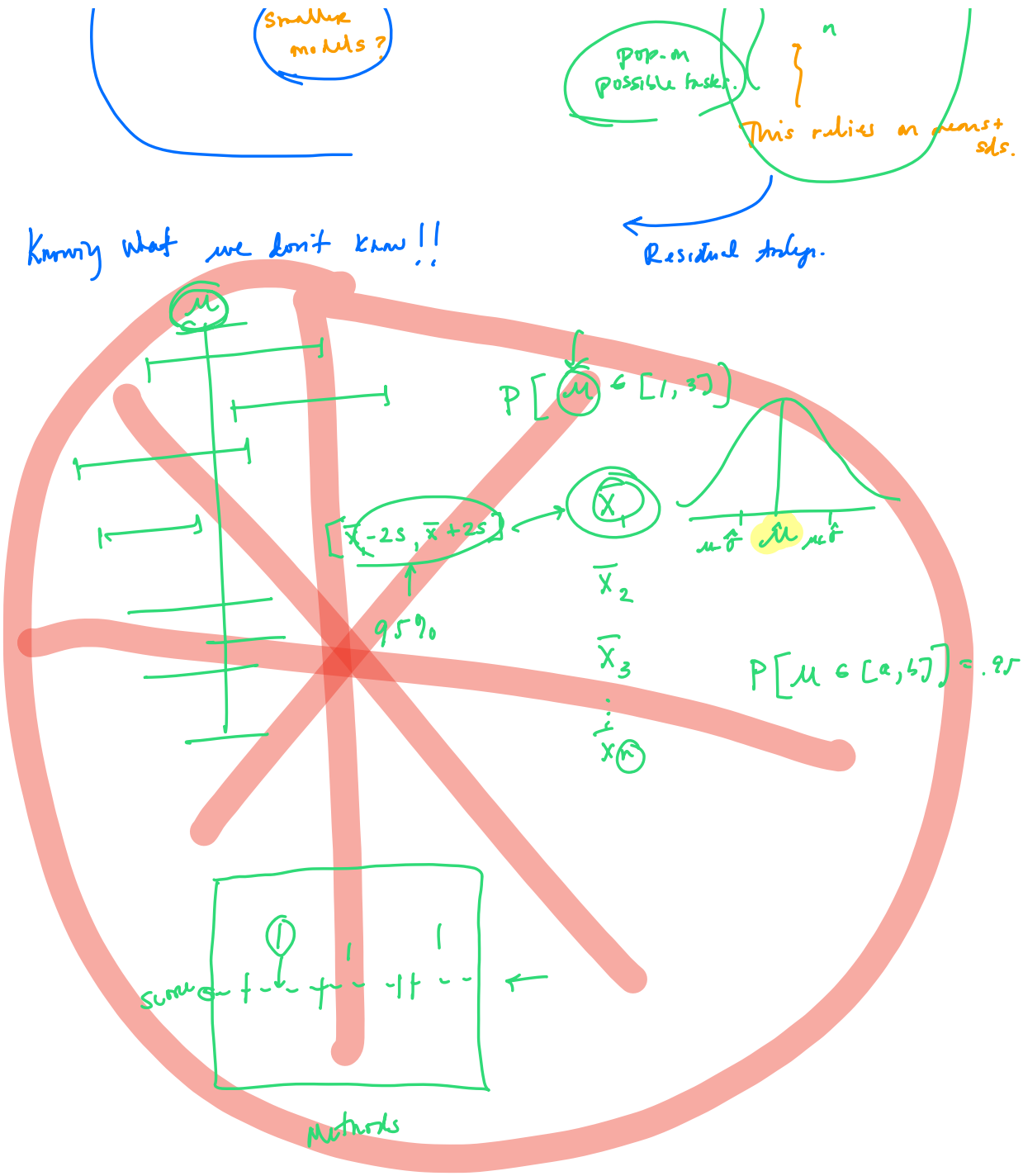
validate on this

scraped all data we could find
↳ trained all to predict species.
↳ eval on "down stream"

→ plant healthy/dis

performance measures.

$x_1 \sim N(\mu, \sigma^2)$
x_2
x_3



Smaller models?
pop. on possible tasks.
n
This relies on means + sds.
Residual Analys.
Knowing what we don't know!!
μ
$P[\mu \in [1,3]]$
$[\bar{x}-2s, \bar{x}+2s]$
$\bar{x}_1$
$\bar{x}_2$
$\bar{x}_3$
$\vdots$
$\bar{x}_n$
95%
$\mu-\hat{\sigma}$ $\hat{\mu}$ $\mu+\hat{\sigma}$
$P[\mu \in [a,b]] = .95$
score
Methods