Small Data Science

How to extract actionable knowledge from less or no data?
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How to leverage:

• your HYPOTHESIS,

• some data, and

• basic psychology
A hypothesis is a **testable** assumption.

Hyp 1: Shopify shops **need** adwords help.
→ **difficult** to test, big data.

Hyp 2: Shopify shops **use** adwords help.
→ **easier** to test, see shopify marketplace!
Why Small Data Science?

Small amount of data
- high uncertainty
- many alternatives

Big data
- low uncertainty
- few alternatives

Make it simple
Make it complex
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Use all background knowledge you can get.

“Solve Problems where People are already paying for solutions” (Dan Norris)

BUT offer different solution!

Example: Wpcurve.com vs. agency
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<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>gmail</td>
<td>free $</td>
</tr>
<tr>
<td>mailchimp</td>
<td>cheap $</td>
</tr>
<tr>
<td>contacts contact</td>
<td>$</td>
</tr>
<tr>
<td>salesforce</td>
<td>$$$$$</td>
</tr>
<tr>
<td>followup.cc</td>
<td>$</td>
</tr>
</tbody>
</table>
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Reason Backwards / Pattern Matching

ex. appointment reminder, Patrick McKenzie, 2014
MRR ~ $6500/month, 142 accounts, …
~ 140 new customers in 2014
~ 0.7% conversion rate
→ bid up to $ 1.8 per adwords click (J. Cohen)

Can you build a business based on these numbers?
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Use the “right” statistics

Median
for “small” samples

What’s most frequent?
1) Type of customer
2) Contract size
3) Length of contract

Mean
for “large” samples

What’s the “average”? 
1) average $$ 
2) average age

Depends on data distribution
Fluctuates with small samples
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Heuristics

Find most important reason and ignore the rest
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Small Data Thinking

1) Bet against yourself – Would I bet $$ for/against?
2) Use counts to estimate unknowns, not percentages.
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Slides, reading list at:
http://h-rd.org/mceu2015

Questions? I like to help, just ask the guy on the photo!

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