Empowering Business Users with Shiny

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What We Gon' Talk 'Bout?

1. What do we mean by "empowering" business users?
2. A couple of examples to show how we have used Shiny within Allstate to engage our business partners with analytics
3. Some observations about using Shiny in this way

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- We can't really help business users if they do not trust the work that we are doing
- We can build relationships by being transparent about the work we are doing and sharing ownership of the work where possible
- Shiny can be used as an effective tool for building positive relationships between us and business users

Why Shiny?

- R's active open source community
- Relatively low barrier to entry (e.g. no need to learn HTML/CSS/JS)
- Exploiting your existing R code for data visualization and analysis

Example 1: Exploring Messy Data

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- Data: Primarily user-documented and hence is very messy and inconsistent
  - E.g. recent changes, assigned resources, and meeting notes that describe incidents along the way
- Our business partners had some experience analyzing this data but were not able to dive as deep as they wanted

Example 1: How Did Shiny Help?

- Shiny helped us more easily collaborate with our business users to explore and understand this data
- We get to leverage their persepective on the business-side of this data
  - E.g. How do software/hardware changes get scheduled and how is that documented?
- Our business partners get to leverage our experience working with and asking questions about data
  - E.g. How does this data need to get transformed for building predictive models?

Example 2: "Delivering" Models

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- Case: Claims adjusters want to be able to make faster claims decisions
- Data: A mixture of closed- and free-form data on claims
  - E.g. Information on involved parties, assessed damages, and case notes from the adjuster
- Claims adjusters have worked extensively with this data but need help understanding what can help predict claim amounts early in the process

Example 2: How Did Shiny Help?

- Shiny helped us quickly create a prototype application to provide estimates of claim amount and allow adjusters to update incorrect information
- We get to leverage their perspective on claims cases
  - E.g. qualitative information relevant to the claim that is hard to measure
- Our business partners get to leverage our experience finding predictive variables and building predictive models
  - E.g. manually tracking a new variable due to its predictive power after initially mining that variable from claims notes

Some Notes to Using Shiny in this Way

- Shiny is a fantastic **supplement** to great work but does not **replace** great work
- As with any tool, it requires:
  - Strategic direction
    - I.e. what does this Shiny app *really* need to do to be useful?

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  - Good data work
    - E.g. in preparing and modeling data