Magic Framework: Stateful Dashboards to Record Relationships Between User Choices

Lana Lukacevic[1,2], Joe Rebagliati[1], Professor Eugene Wu[1], Max Mauerman[3], Daniel Osgood[3]
[1]WuLab, Data Science Institute, Columbia University; [2]William E. Macaulay Honors College
[3]Financial Instruments Sector Team (FIST) of the International Research Institute for Climate and Society at the Columbia Climate School

Introduction

Motivation:

- National index insurance policies can protect millions of small-holder farmers across Africa.
- Proven strategies rely on customized visualization dashboards that empower farmers to design and assess policies that would be good for *them*.
- But rapidly building new interfaces is hard.

Challenges*:*

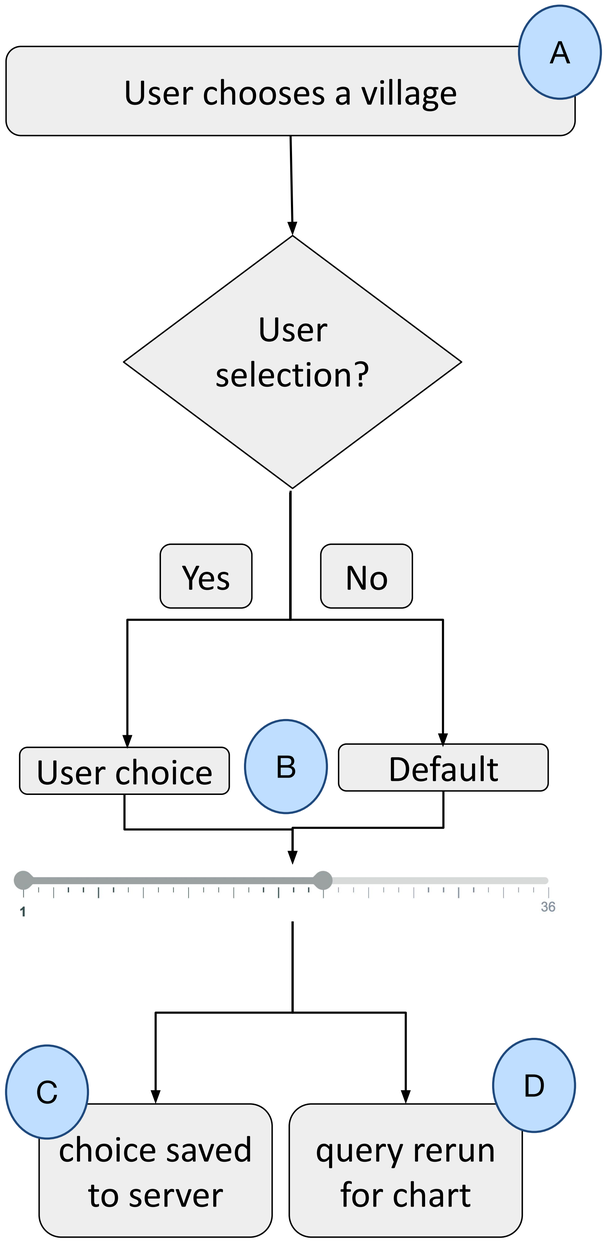
- Data in interface based on complex and dynamically changing SQL queries
- Complex data dependencies: a slider's state is per-village; a dropdown sets the village.
- Want to record state of all user interactions to reproduce, analyze, & inform national policy design

Previous interface for a single deployment in Ethiopia took 6 months due to these challenges.

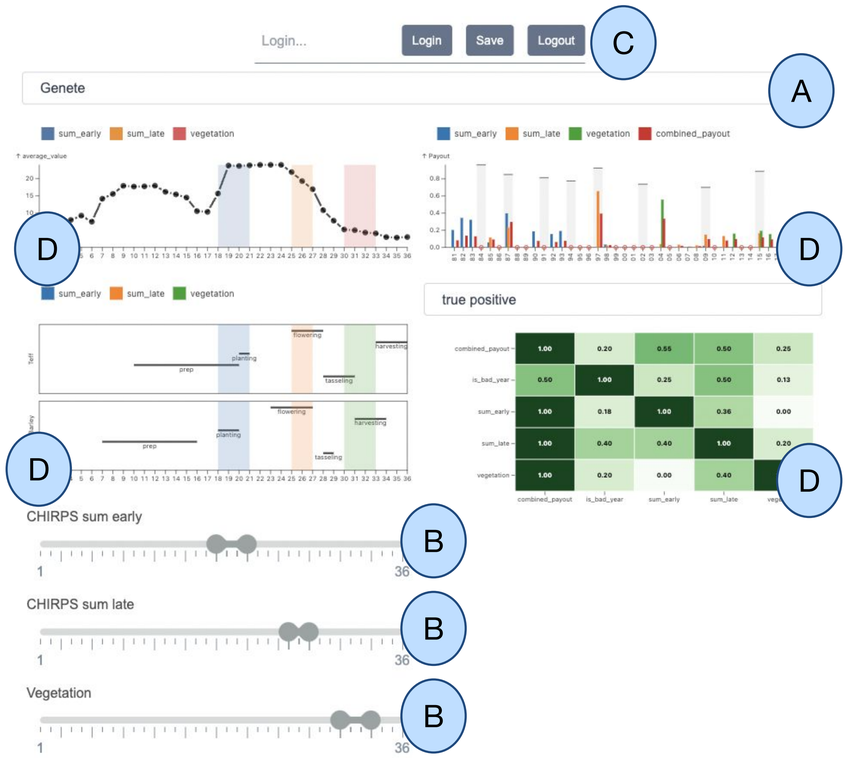
Project:

- Augment a new framework called Magic to manage data dependencies and recording state automatically
- Use the framework to rapidly develop new policy design interfaces

Data Dependencies in Action



Dashboard Using Framework



Conclusion

Used the Magic framework to successfully generate an interactive dashboard, with defaults, state-saving by login, and data dependencies.

Next Steps:

- Develop interfaces for new deployments, such as in the Democratic Republic of the Congo
- Study reduction in development time

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