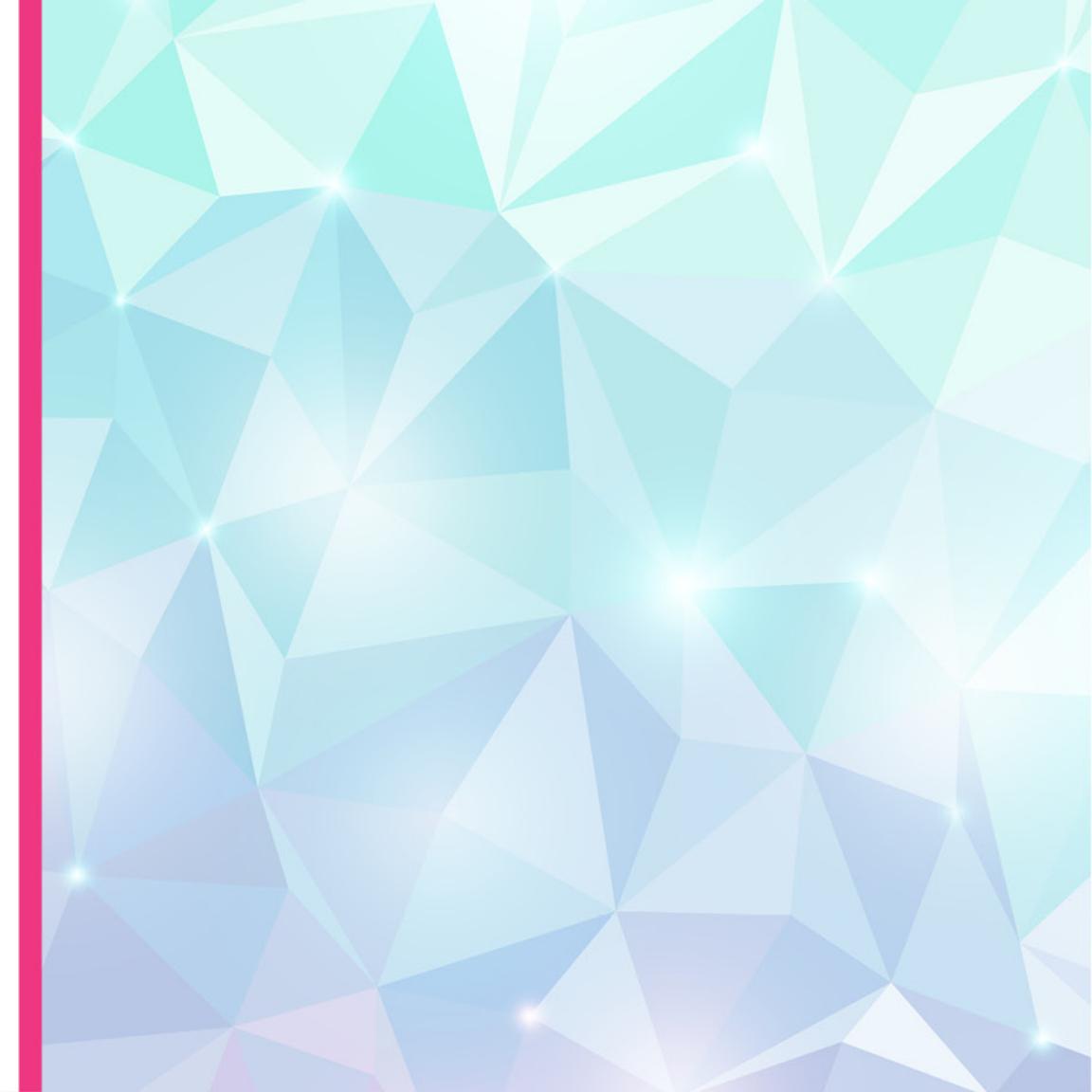


REPORTING & DASHBOARDING IN R

Lead by Learning • Advanced Analytics

7/12/2019



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👨‍👩‍👧 Population Health Team

🚗 Previously @ CHOP CAR
(Center for Autism Research)

📖 Philly Reads Volunteer

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💻 Application Development Team

✈️ Previously @ Lockheed Martin

🔬 Outreach Officer of iSTEM

🏃‍♂️ Runner



CHILDREN'S HOSPITAL OF PHILADELPHIA

- 1 Nation's 1st Children's Hospital
- 2 #2-ranked US Children's Hospital
- ↗ FY-18 Statistics
 - 29,313 inpatient admissions
 - 1.38 million outpatient visits
 - \$360 million in research grants



CENTER FOR HEALTHCARE QUALITY & ANALYTICS

Support improvement & analytics work that produces *demonstrably* better outcomes for children with complex medical problems.

Multi-functional team

- 35 data analysts
- 20 data engineers
- 2 data developers



AGENDA



Project Scenario



Dataset Overview



Report Generation

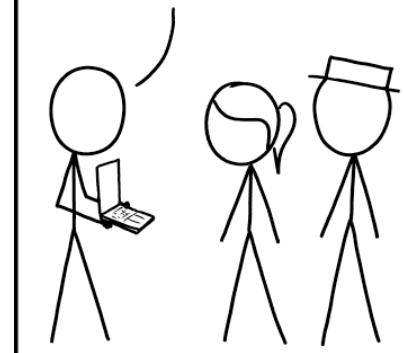


Report Emails

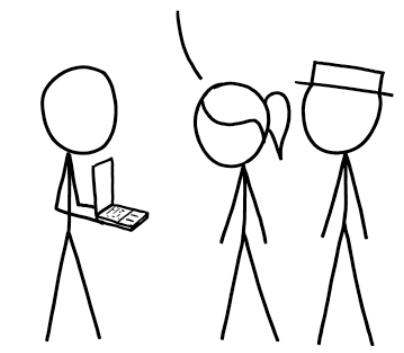


Dashboard Building

CHECK IT OUT—I MADE A FULLY AUTOMATED DATA PIPELINE THAT COLLECTS AND PROCESSES ALL THE INFORMATION WE NEED.



IS IT A GIANT HOUSE OF CARDS BUILT FROM RANDOM SCRIPTS THAT WILL ALL COMPLETELY COLLAPSE THE MOMENT ANY INPUT DOES ANYTHING WEIRD?



IT... MIGHT NOT BE.

I GUESS THAT'S SOMETHING.
WHOOPS, JUST COLLAPSED. HANG ON, I CAN PATCH IT.



SCENARIO

You are an analyst partnering with a hospital inpatient unit who wants to better understand their patients.

They want to know:

- Which patients have long lengths of stay?
- When are patients admitted to this unit?
- What is interesting about these patients?



DATASET OVERVIEW

Dataset is generated & DOES NOT contain real patient information!

COLUMN	DESCRIPTION
hosp_admit_dt	Date patient was admitted
hosp_discharge_dt	Date patient was discharged
visit_reason	Reason for the patient's visit
readmit_7_day_ind	Indicates if patient was readmitted in 7 days
readmit_14_day_ind	Indicates if patient was readmitted in 14 days
readmit_30_day_ind	Indicates if patient was readmitted in 30 days
discharge_followup_call_ind	Indicates if there was a follow-up call after discharge
provider	Provider name
age	Age in years

R MARKDOWN

Reproducible notebook-style data analysis

🤖 Supports R, Python, SQL, & more!

👗 Render to PDF, HTML, & more!

🎟️ Add parameterized variables



<https://rmarkdown.rstudio.com/>

FLEXASHBOARD

Easy interactive dashboards for R

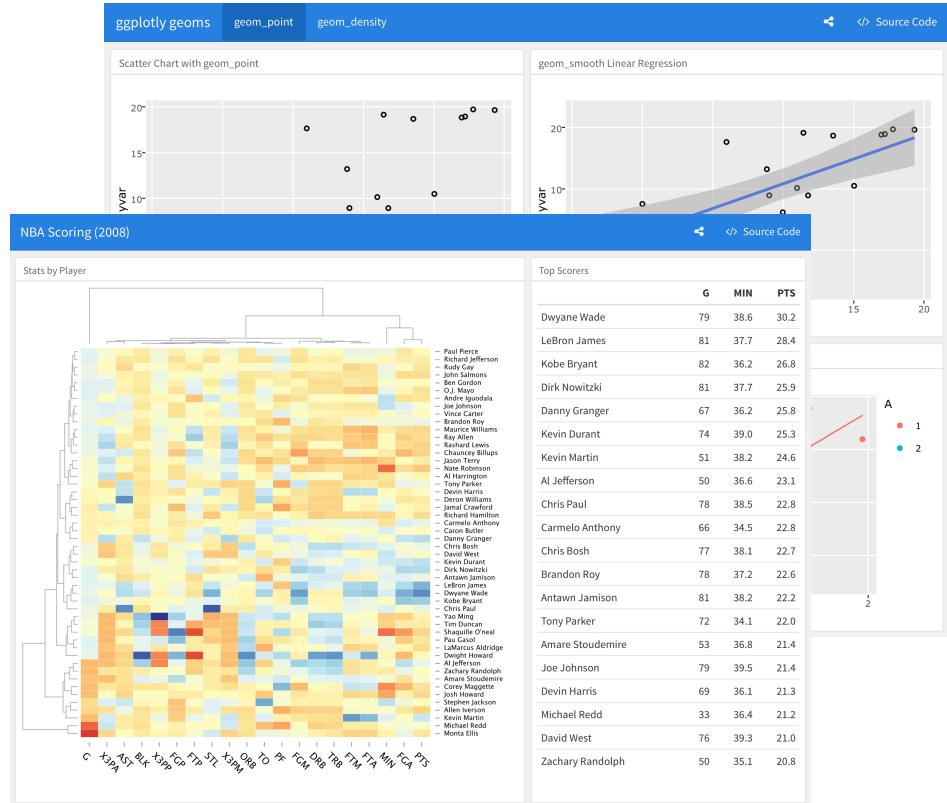
✍ Generate with R Markdown

กระเป๋า Variety of components & layouts

Add interactive Shiny widgets

📱 Responsive mobile views

🖌️ Supports custom themes



<https://rmarkdown.rstudio.com/flexdashboard>

WORKSHOP