

From Sparse Data-sets to Graphs

When Explicit Relationships
Bridge the Gaps

Who's me?

- ▶ Enrique Bustamante
- ▶ Data Scientist at EB Games
- ▶ I do math with computers
- ▶ Huge nerd

Where I work

EB GAMES

ZiNG
POP CULTURE

- ▶ Head office, warehouse and dispatch centre in Brisbane
- ▶ I have access to almost all the data.
- ▶ 80% of our transactions have loyalty data attached

Marketing Team

- ▶ Send up to 20 different pieces of Electronic Digital Marketing (EDM) a week
- ▶ Any customer will receive at most 1 per day
- ▶ Only to customers who have signed up to our loyalty program
- ▶ Targeting is manual-ish

What was I working on?

Monday

Car Driver
Out Now

Pointy Clicky
Story V
Preorder

Tuesday

Grandpa
Simulator
Out Now

New
Superhero
Socks
Available

Space Ships
XXVI
Special Edition
Out Soon

Wednesday

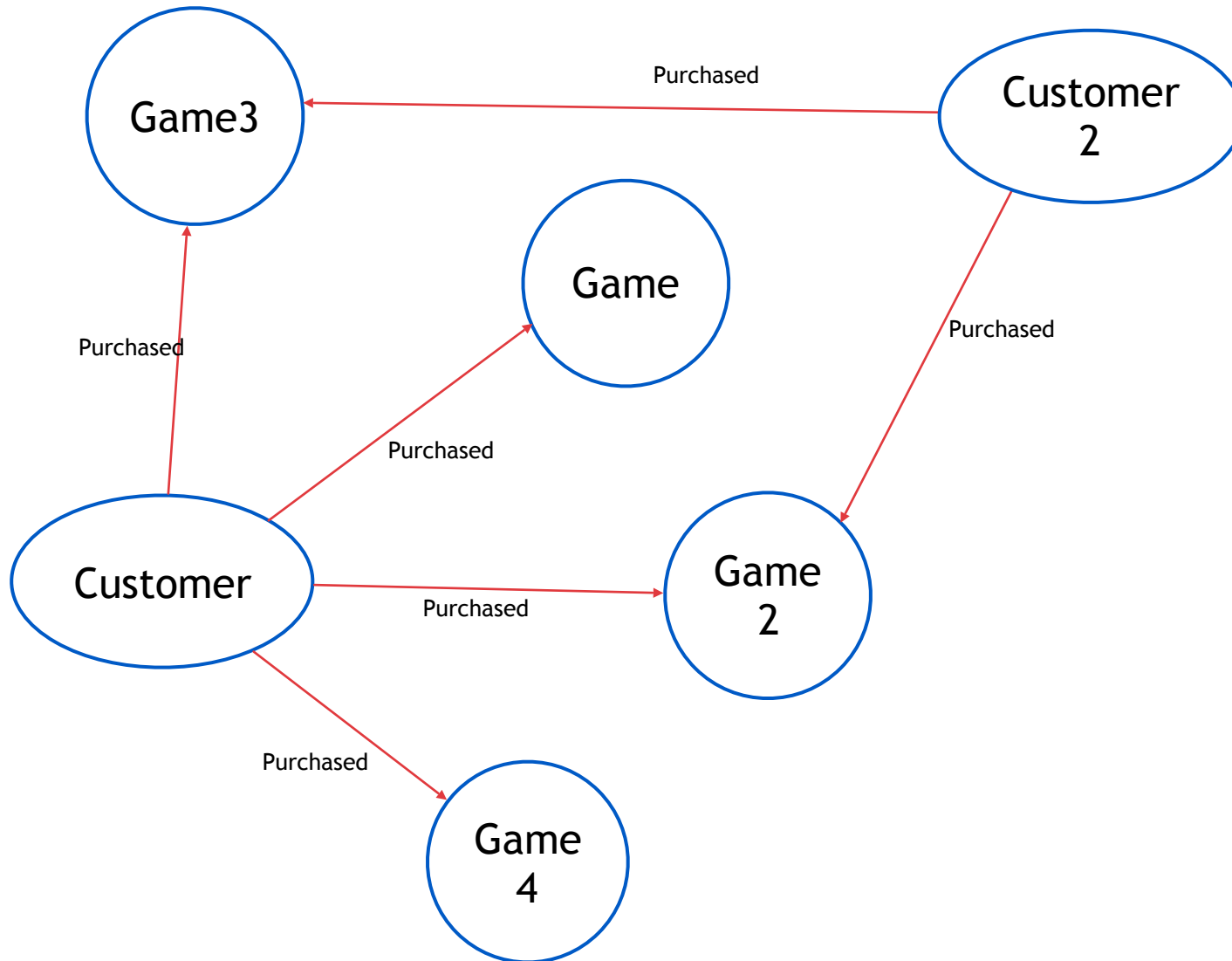
Person Puncher
2020
Out Now

Pointy Haired
Anime Game
VIII
Price Drop

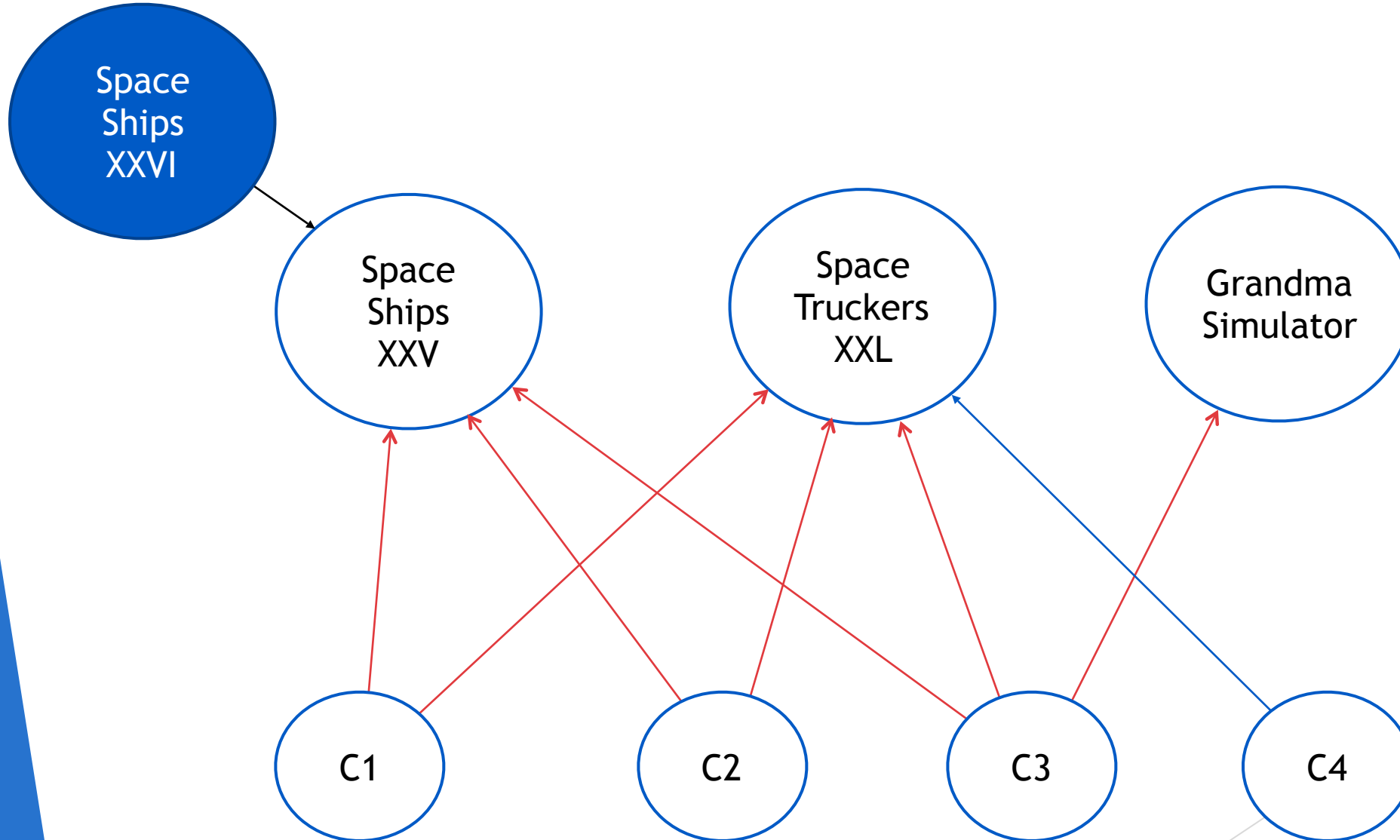
What customer segments are there?

- ▶ Use clustering algorithms on purchase histories.
- ▶ Right?
- ▶ Damn!
- ▶ Why didn't it work?

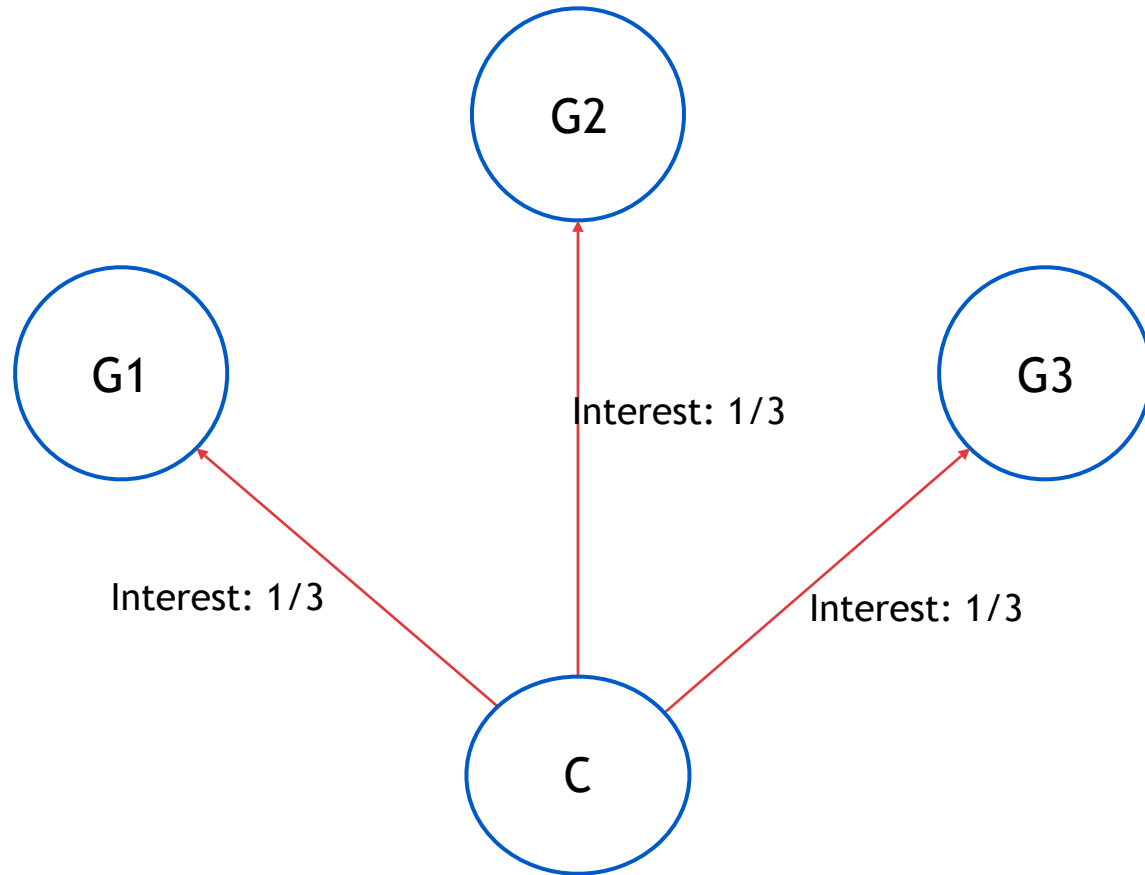
Graphs to the rescue!



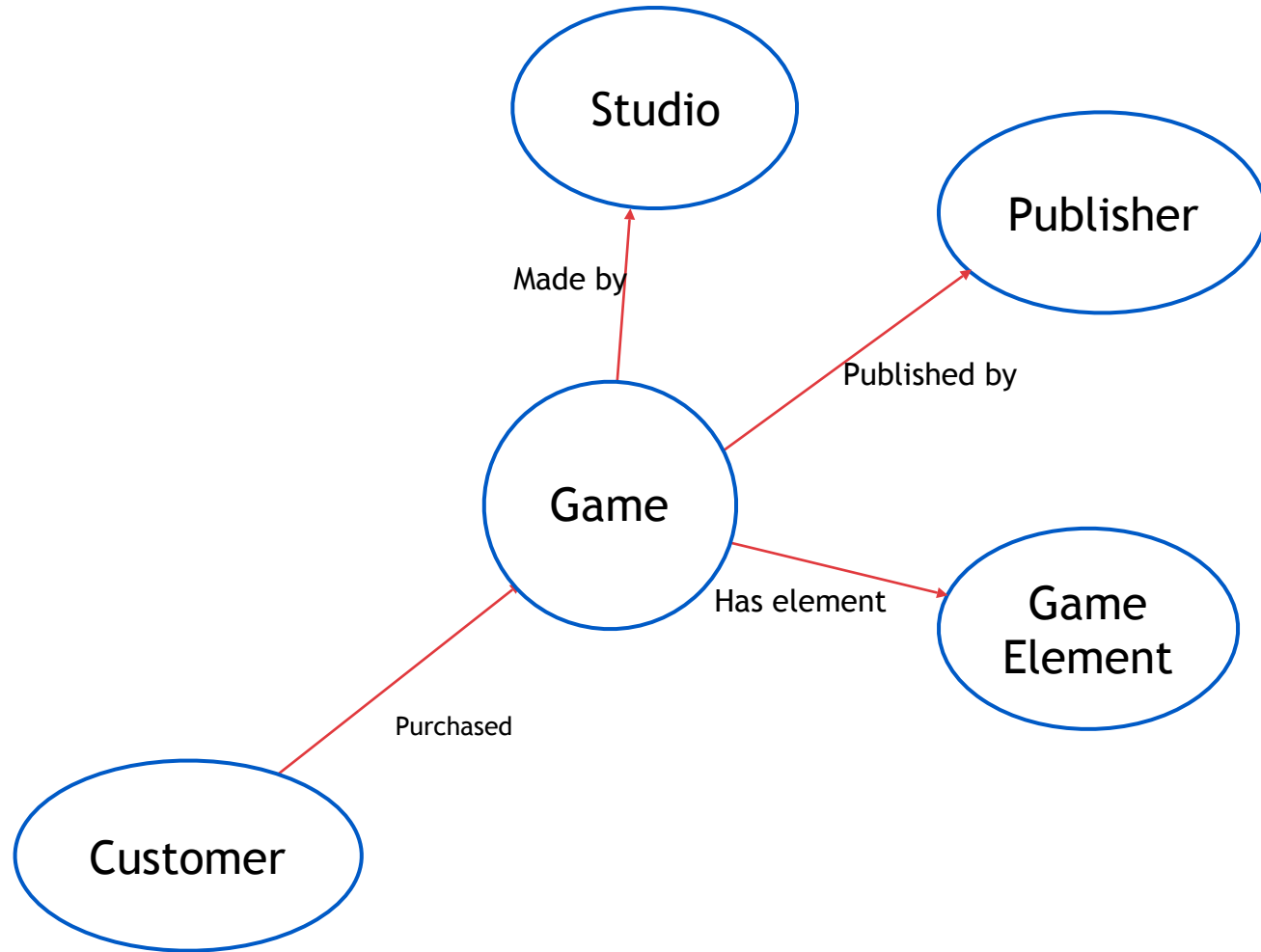
Initial solution



Some refining



Future Plans



Outcomes

- ▶ Better targeting and confidence in process
- ▶ Easier to communicate outside of team
- ▶ Explicit relationships are easy to conceptualise and continuously improve
- ▶ Looks cool

Questions?



Thank you for your attention

The background features abstract geometric shapes in shades of red and blue. On the right side, there are several overlapping triangles and polygons in various tones of red and blue, creating a layered, dynamic effect. The left side of the image is mostly white, with a small blue shape visible at the bottom left corner.