

CS/INFO 4154:

Analytics-driven Game Design

Lecture 13:

Data Analysis
Workshop

Friends Postmortem Tuesday

- High-level view: were players engaged?
 - Report median levels completed and time played
 - Show burndown charts for levels completed and time played
- Explain the ***biggest*** problem with engagement
 - What is the problem?
 - How did you identify this problem?
 - i.e. burndown chart analysis
 - ***Where*** is the problem happening?
 - Show a (spatial) heatmap
 - ***What proportion*** of players are affected?
 - Show a state-transition diagram or temporal heatmap
 - How do you think you will fix it?

Revised Plan Tuesday

- Same deal as before
- Due at 11:59pm

Newgrounds Release 11/17

- A/B test
 - released by Tuesday
 - you will receive email about this
 - See A/B testing lecture for more details
- Restrictions
 - Max width 800
 - File Size: 20MB
 - Can stream from GDIAC
 - you will receive email about this

The Plan

1. Friends Release results!
2. Brainstorming activity
3. CSV activities and burndown charts
4. JSON activities
5. MySQL activities

Setup:

SFAM password:

<https://unixcfg.serverfarm.cornell.edu/>

Click SFAM

Click Edit

VPN:

<http://www.it.cornell.edu/services/vpn/howto/>

VPN: `cuvpn.cuvpn.cornell.edu`

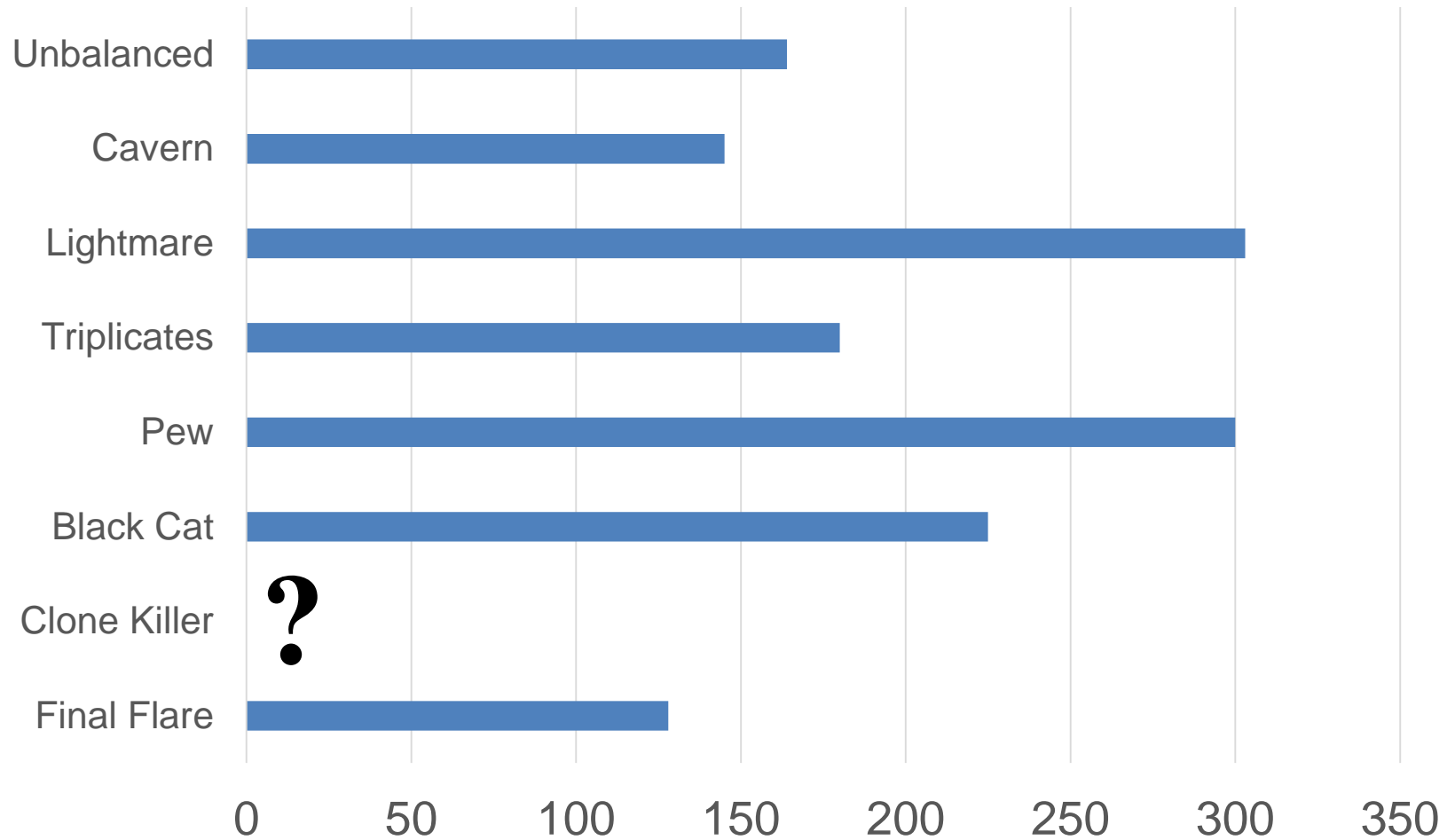
Login: `<netid>@en-cs-vpn-acad`

SSH client:

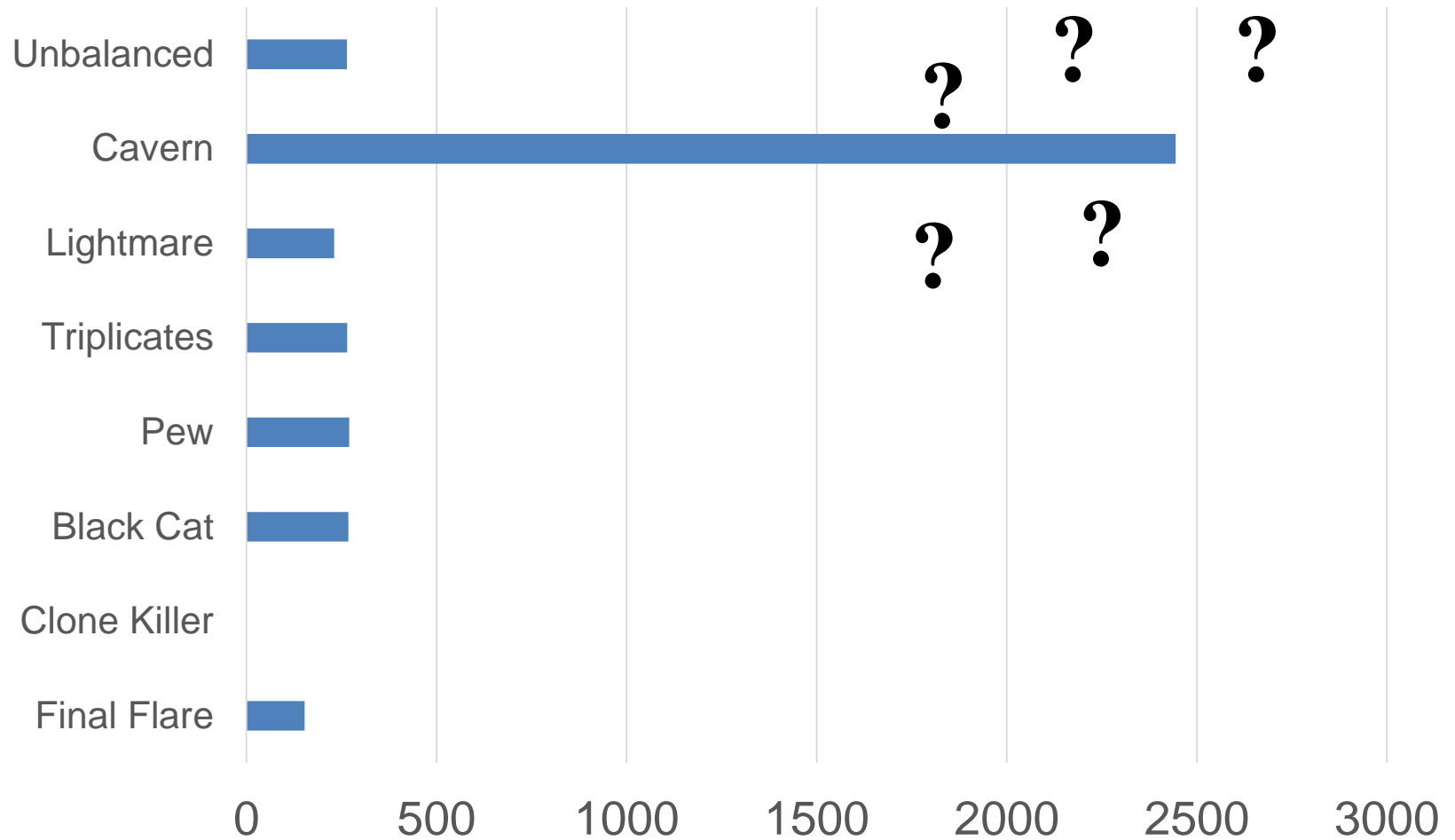
<http://www.putty.org>

Friends Release Results!

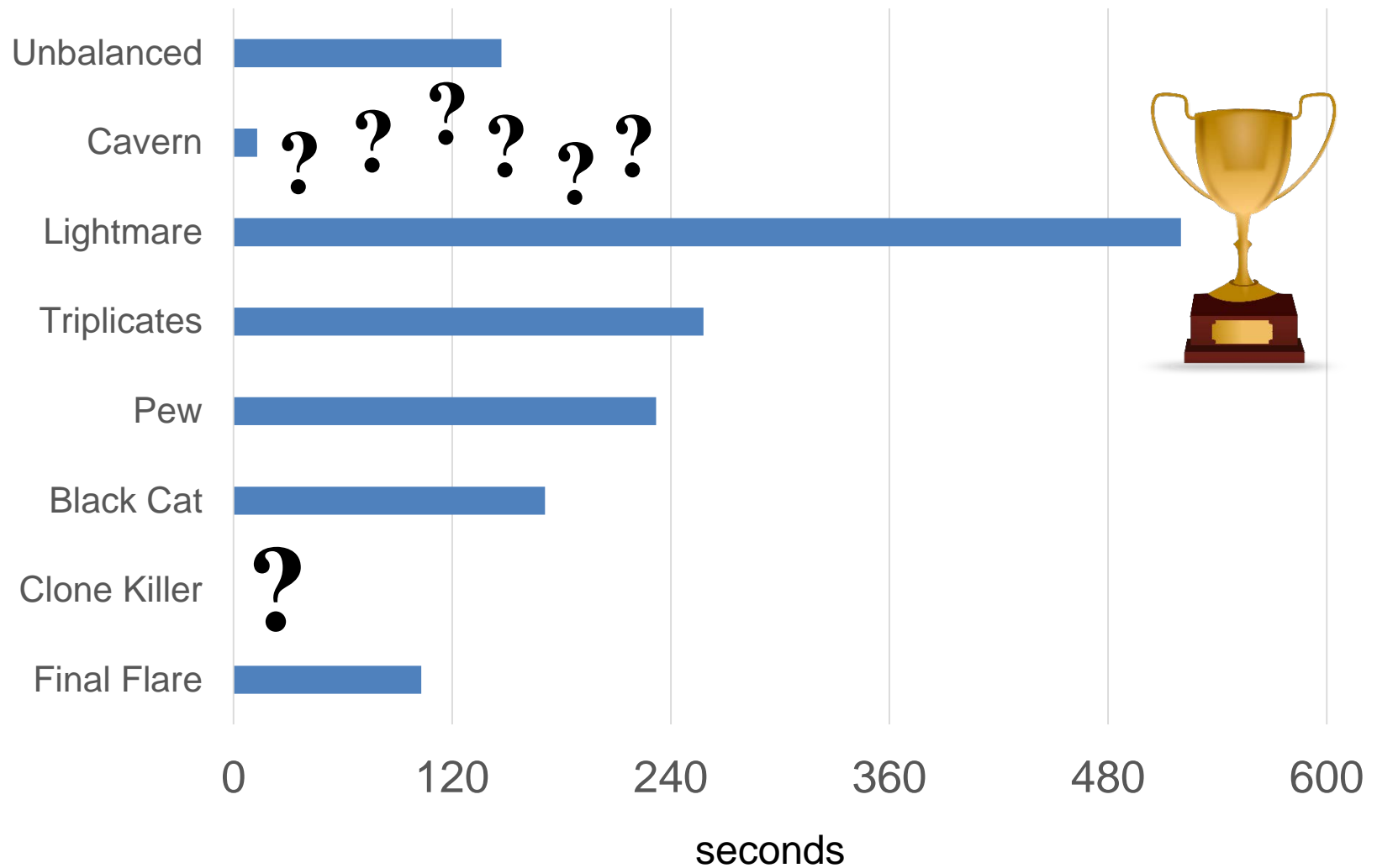
Unique players



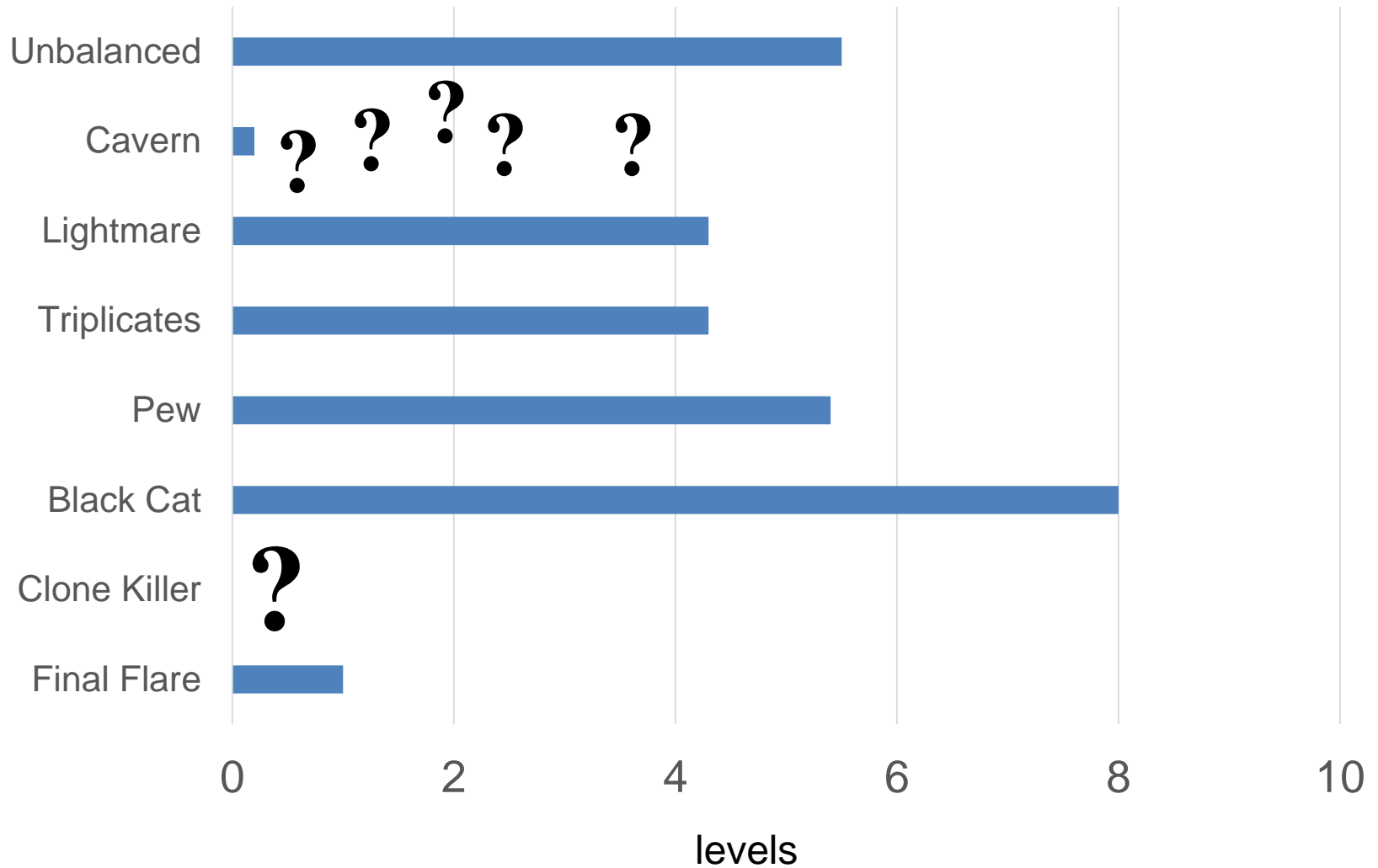
Pageloads



Active Time



Levels Completed



Brainstorming activity

- What would you want to look for in *their* game?
- How would you look for it?

Brainstorming activity

- What do you want to look for in *your* game?
- How will you look for it?
- Did you record what you need?

CSV

`http://gdiac.cs.cornell.edu/cs4154/fall2015/get_csv.php?
game_id=XYZ
&version_id=XYZ`

CSV Scavenger Hunt!

- Who played the longest?
 - How long?
- Who completed the most levels?
 - How many?

Making a Burndown Chart

Player	Levels Completed		Level	% Remaining
1	12		2	
2	16		4	
3	8		6	
4	3		8	
5	5		10	
6	7		12	
7	2		14	

$\square = \text{COUNTIF}(\$B\$2:\$B\$8, ">=" \& D2) / 7$

JSON

`http://gdiac.cs.cornell.edu/cs4154/fall2015/get_data.php?`
`game_id=XYZ`
`&version_id=XYZ`
`&count=X`
`&offset=X`
`&show_html=NO`

JSON scavenger hunt

- How many pageloads?
- How many actions?
- Which action happened the most?
 - How many times?
- How many unique players?






MySQL

SQL scavenger hunt

- How many pageloads?
- How many actions?
- Which action happened the most?
 - How many times?
- How many unique players?

Making a heat map

Death	X	Y			1	2	3	4
1	1	1		1	2	1	0	0
2	2	1		2	1	0	0	0
3	1	2		3	1	0	0	0
4	1	1		4	0	0	1	1
5	3	1						
6	4	4						
7	4	3						

 = COUNTIFS(, "=", ,
, "=", )