What the Zooniverse Can Do For You

Chris Snyder

Wednesday, September 25, 13



Few have witnessed what you're about to see

Experience a privileged glimpse of the distant universe, observed by the Sloan Digital Sky Survey and Hubble Space Telescope



Classify Galaxies

To understand how galaxies formed we need your help to classify them according to their shapes. If you're quick, you may even be the first person to see the galaxies you're asked to classify.

Begin Classifying



How Do Galaxies Form?

History of Galaxy Zoo

Roughly one hundred billion galaxies are scattered throughout our observable Universe, The launch of this new version of Galaxy Zoo, the 4th, comes just a few weeks after the

Online collection of citizen science projects

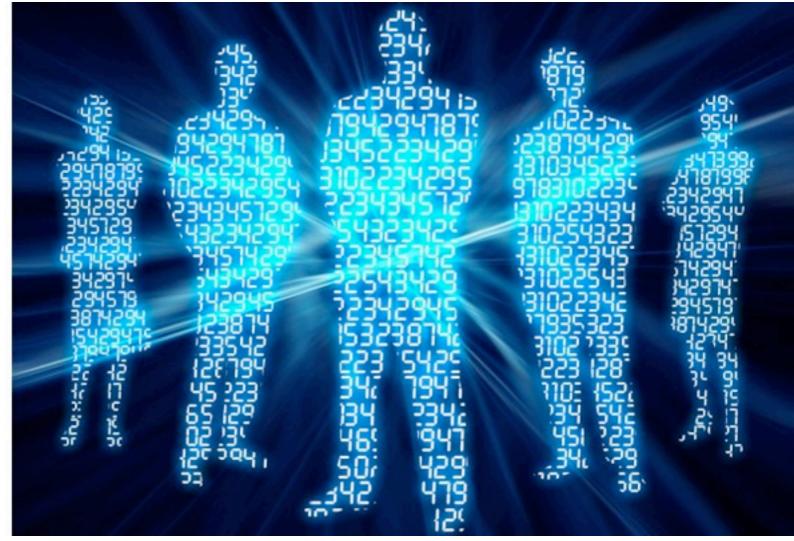
~18 active projects 850,000+ volunteers 500,000,000+ annotations

What is Zooniversestyle citizen science?

Web-scale human data analysis

NOT

- data collection
- volunteer computing

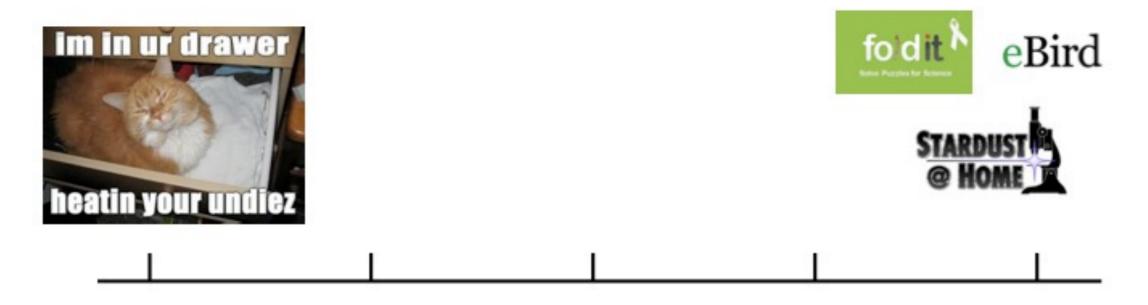


Social Contract

- Volunteers, not users.
- Contribute to real research
- Don't waste people's time

Cognitive Surplus

200 billion hours a year spent watching TV by US adults	TV
	People have a lot of free time!
	Wikipedia

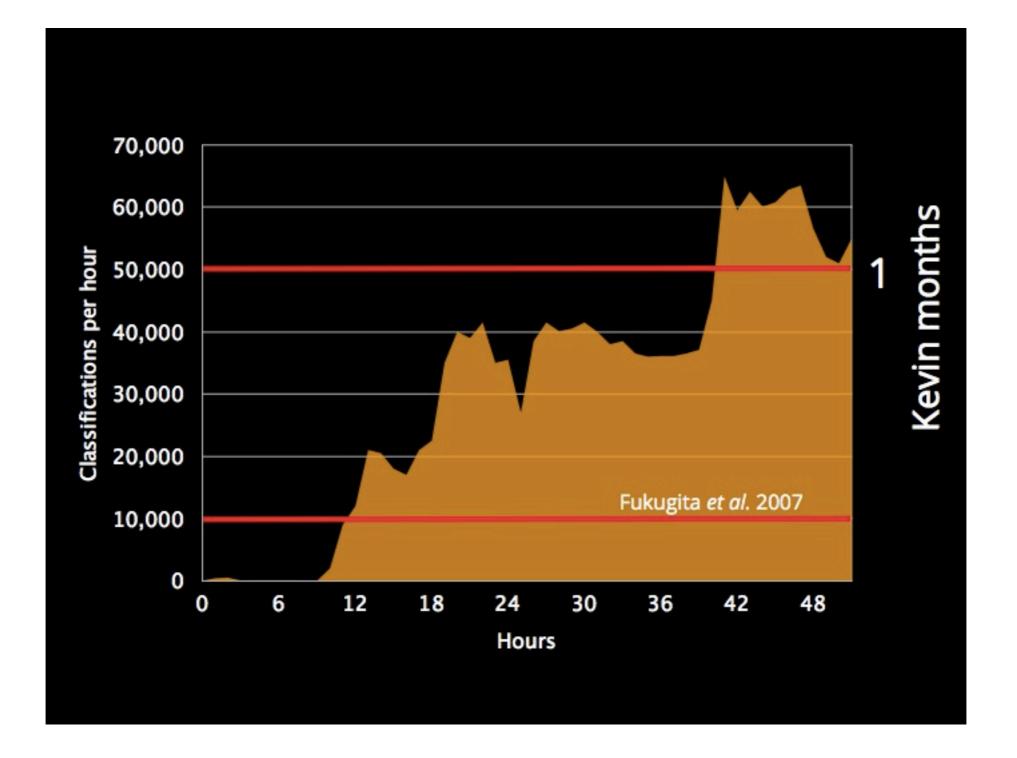


Spectrum of cognitive surplus

Power of the Crowd

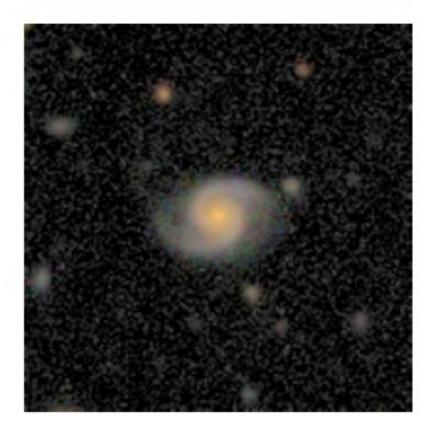
- Accuracy
- Scale
- Serendipity
- Education





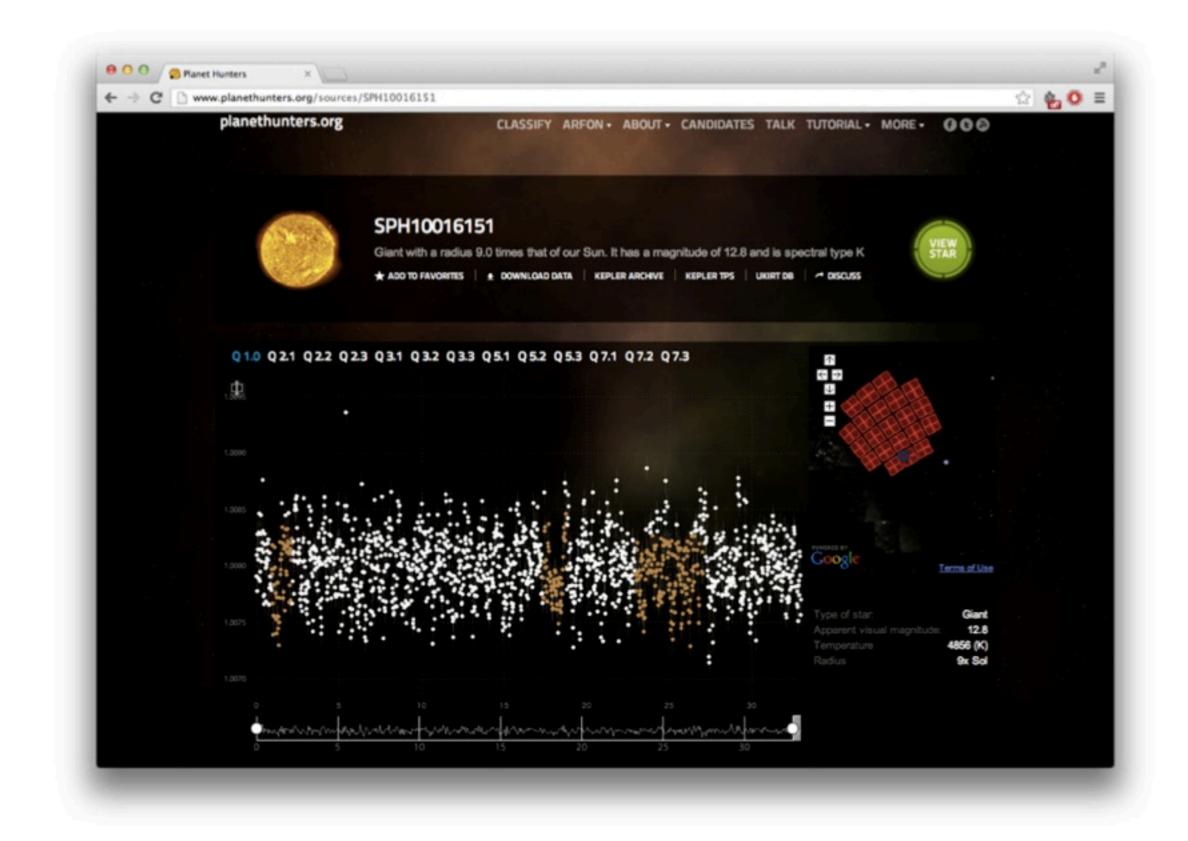
Basic Terms and Workflow

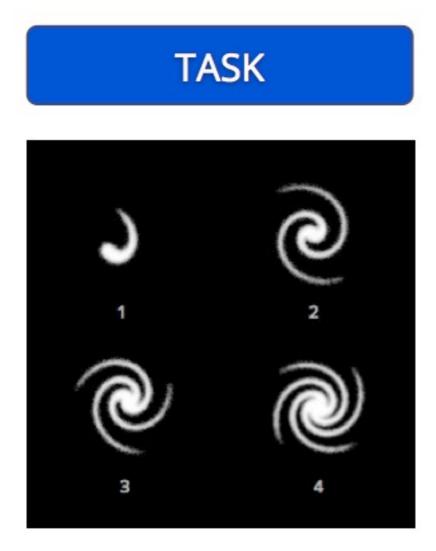




[{

```
"id": "50dc9dc9a2fc8e378909e091",
"activated_at": "2013-01-06T06:07:57Z",
"classification_count": 4,
"coords": [-2.5073510440027307, 34.77385913680884],
"created_at": "2013-01-02T21:28:29Z",
"group_id": "50e477293ae740a45f000001",
"location": {
  "standard": [
              "subjects/standard/50dc9dc9a2fc8e378909e091_0.jpg",
              "subjects/standard/50dc9dc9a2fc8e378909e091_1.jpg",
              "subjects/standard/50dc9dc9a2fc8e378909e091_2.jpg"
},
"metadata": {
 "capture_event_id": "50dc9dc9a2fc8e378909e091".
 "counters": {
    "buffalo": 2,
    "wildebeest": 22
 }
},
"project_id": "5077375154558fabd7000001",
"random": 0.05598564549127116,
"state": "active",
"updated_at": "2013-01-02T21:28:29Z",
"workflow_ids": ["5077375154558fabd7000002"],
```

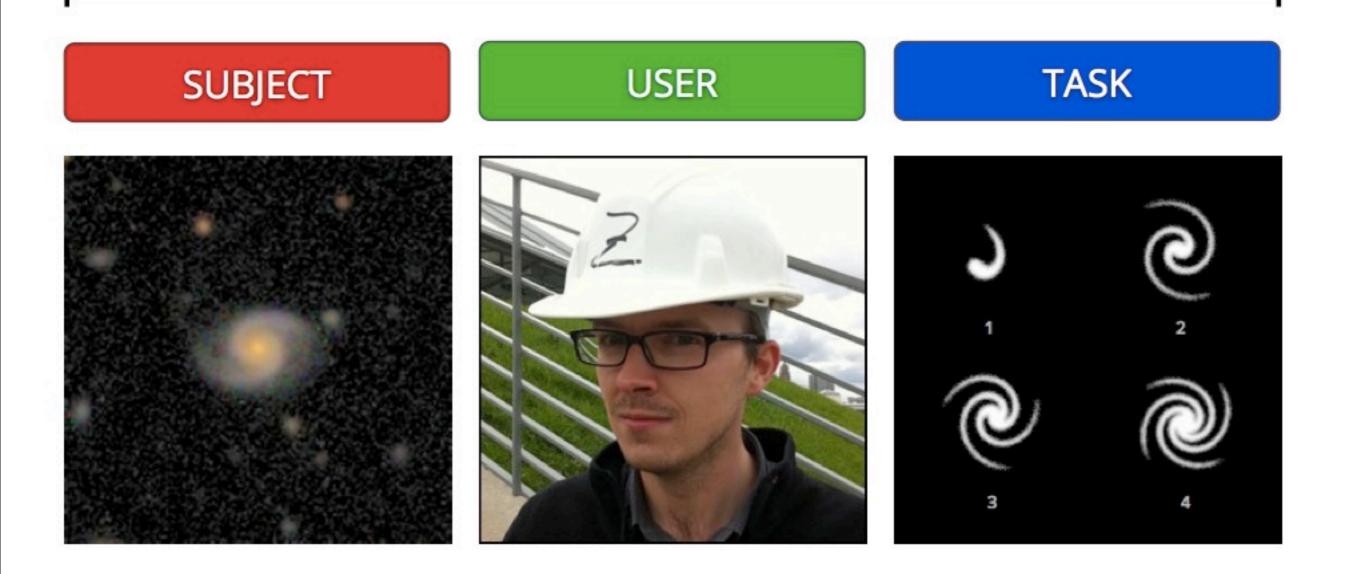




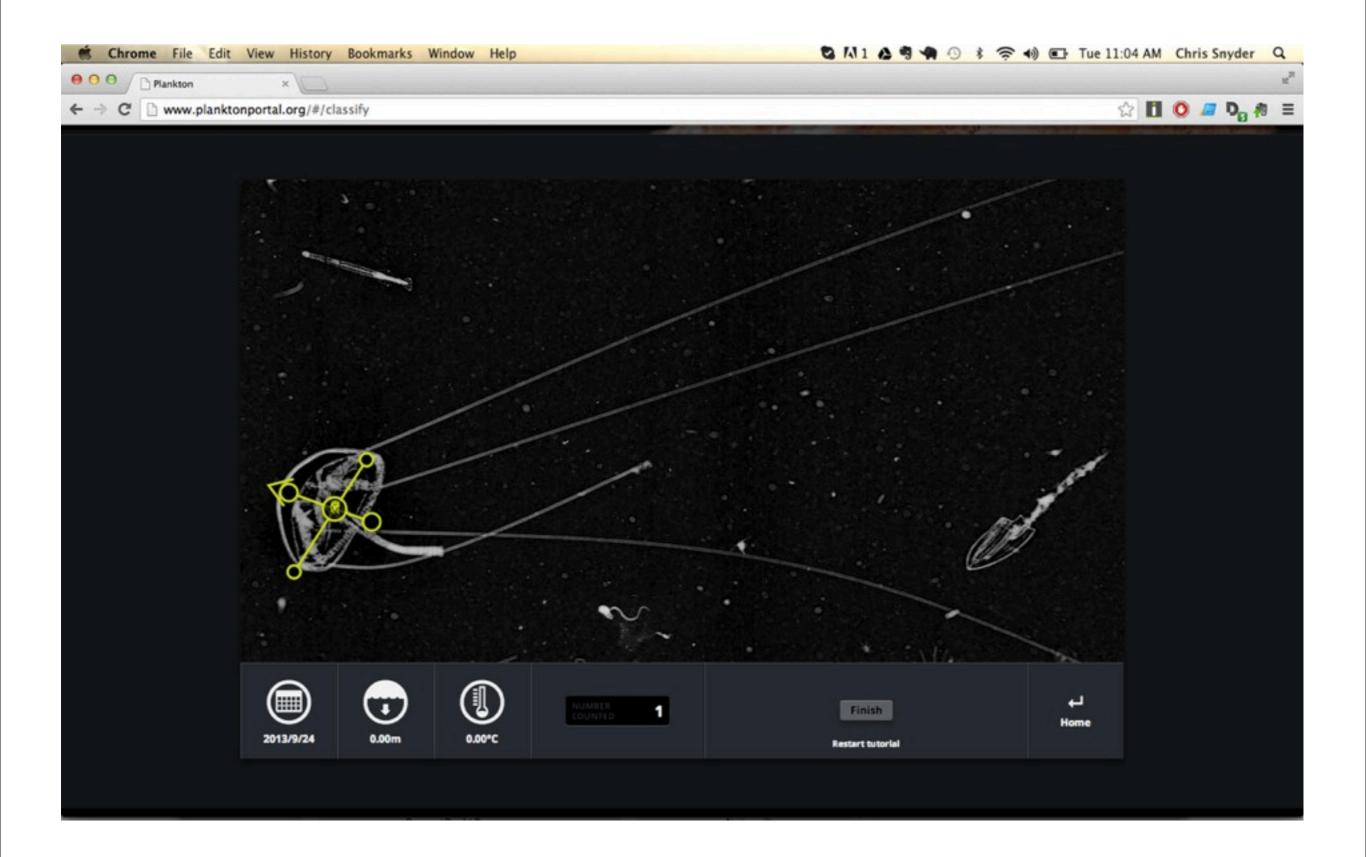
USER

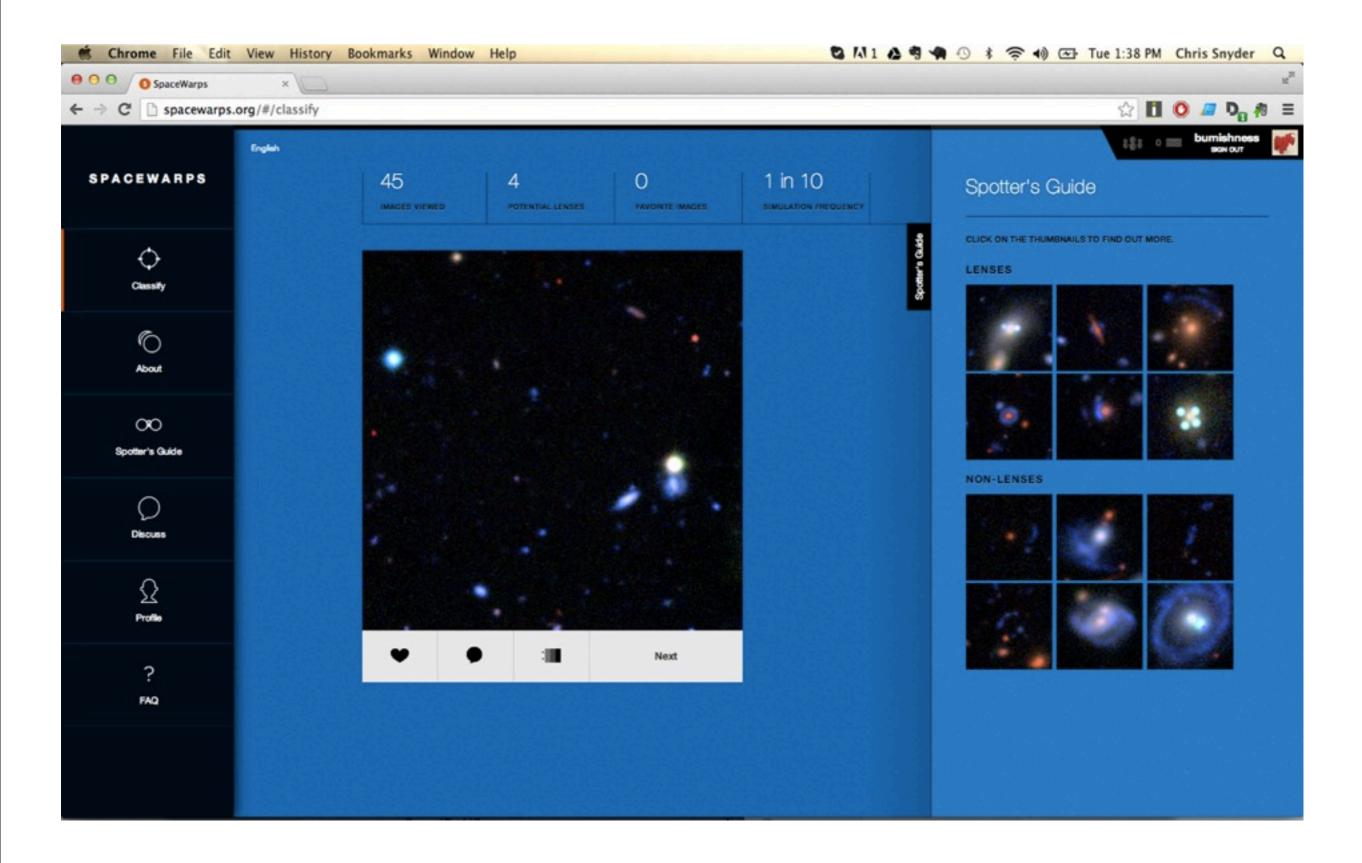


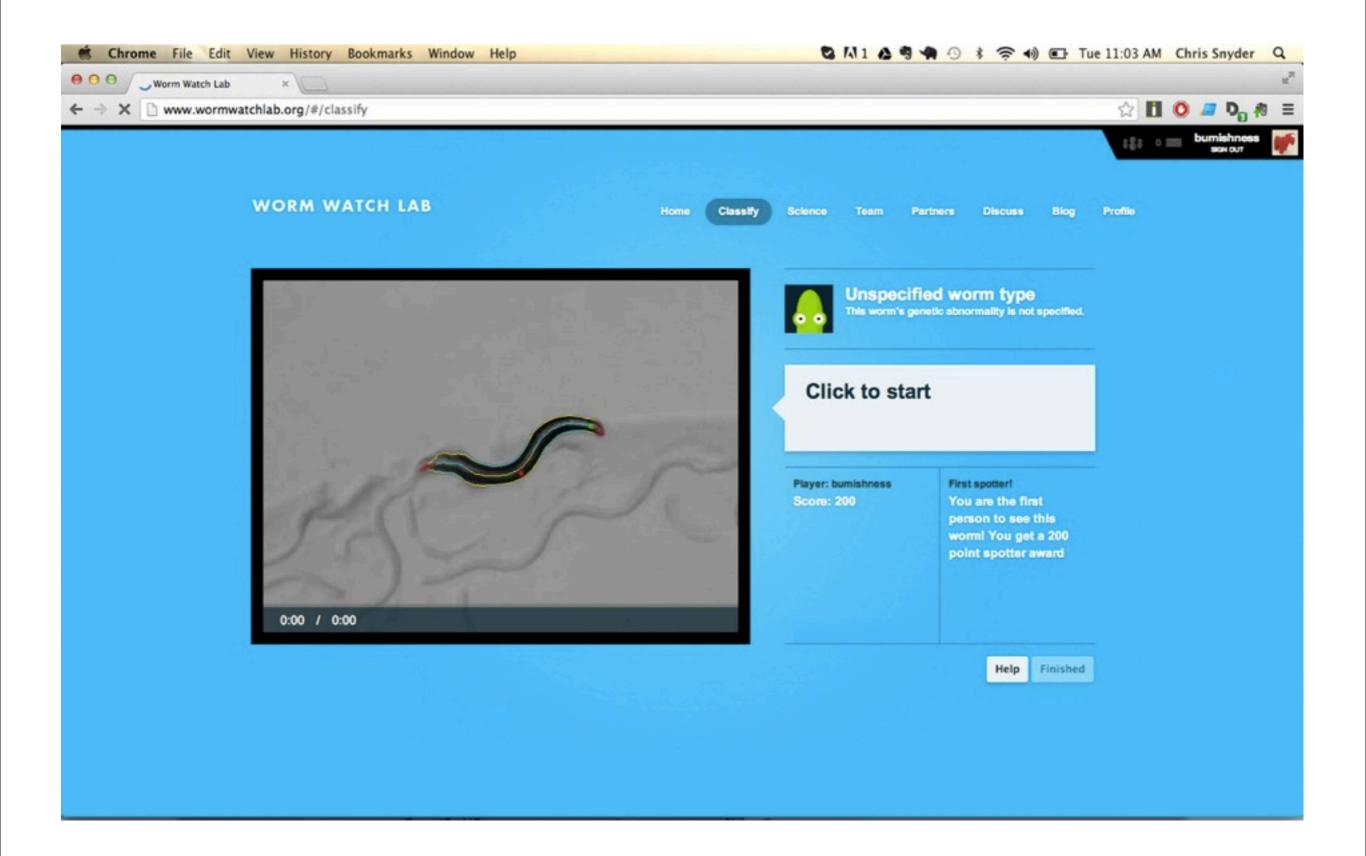
CLASSIFICATION

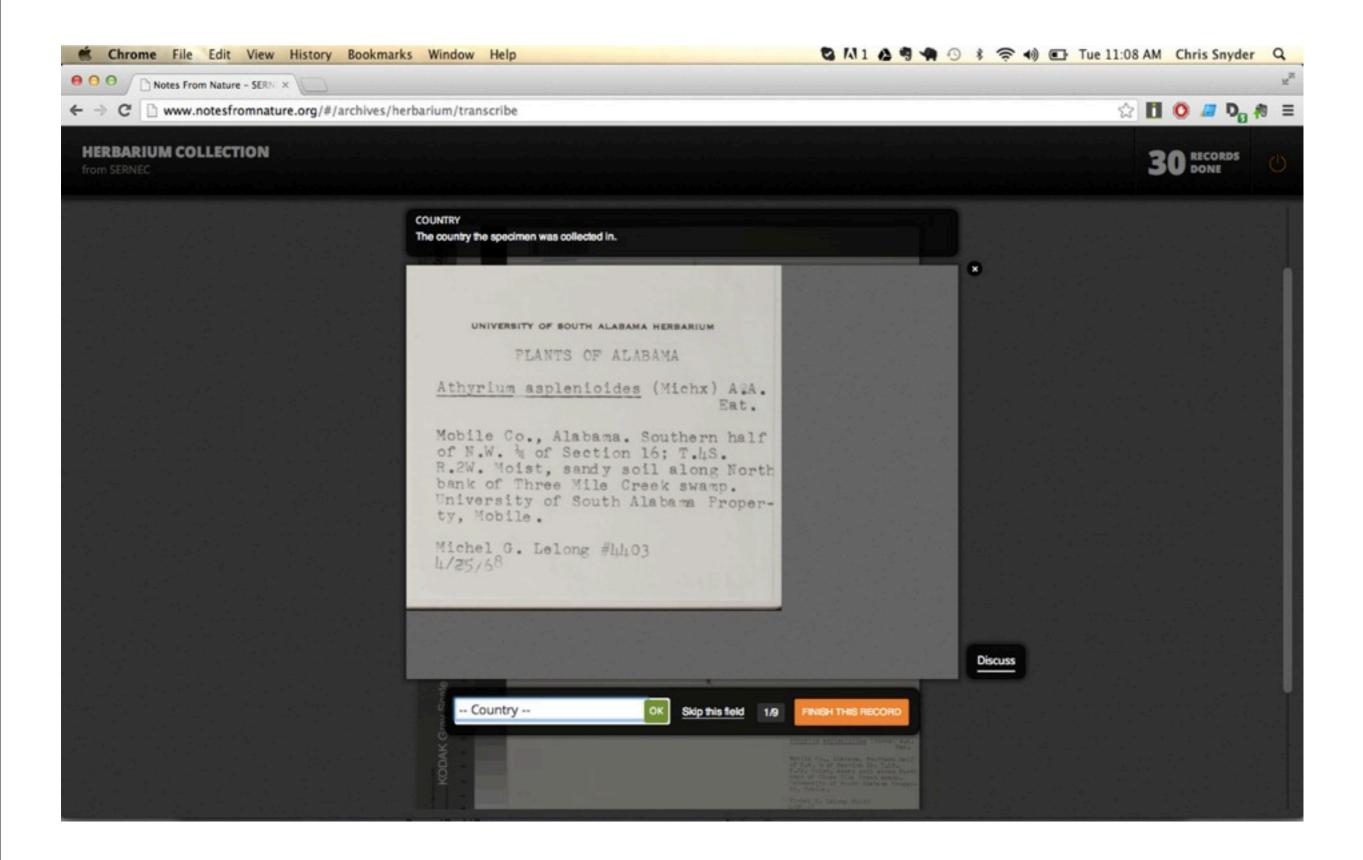


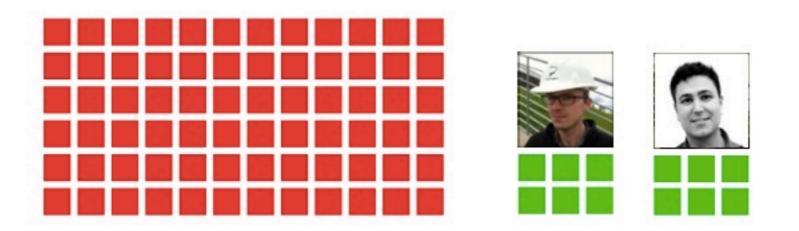
```
{"subject_ids"=>[BSON::ObjectId('50dcb441a2fc8e37890dafe8')],
  "annotations"=>
    [{"species"=>"wildebeest",
      "count"=>"3",
      "behavior"=>["eating"],
      "babies"=>"false",
      "search"=>""}.
    {"agent"=>
      "Mozilla/5.0 (Windows NT 6.1; rv:17.0) Gecko/20100101 Firefox/17.0"},
     {"started"=>"Tue, 05 Feb 2013 18:54:39 GMT"}],
   "project_id"=>BSON::ObjectId('5077375154558fabd7000001'),
   "workflow_id"=>BSON::ObjectId('5077375154558fabd7000002'),
  "updated_at"=>2013-02-05 18:48:38 UTC,
   "created_at"=>2013-02-05 18:48:28 UTC,
   "user_ip"=>"12.34.56.78",
   "user_id"=>BSON::ObjectId('5058b578ba40af2366000169'),
   "user_name"=>"arfon"}
```



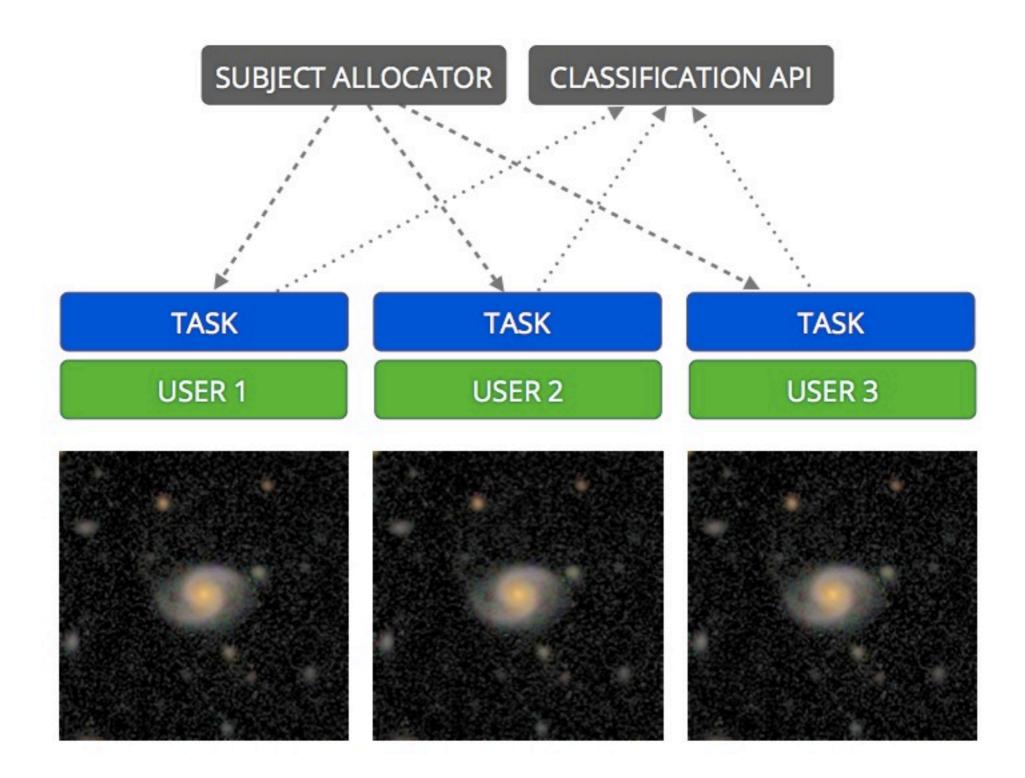




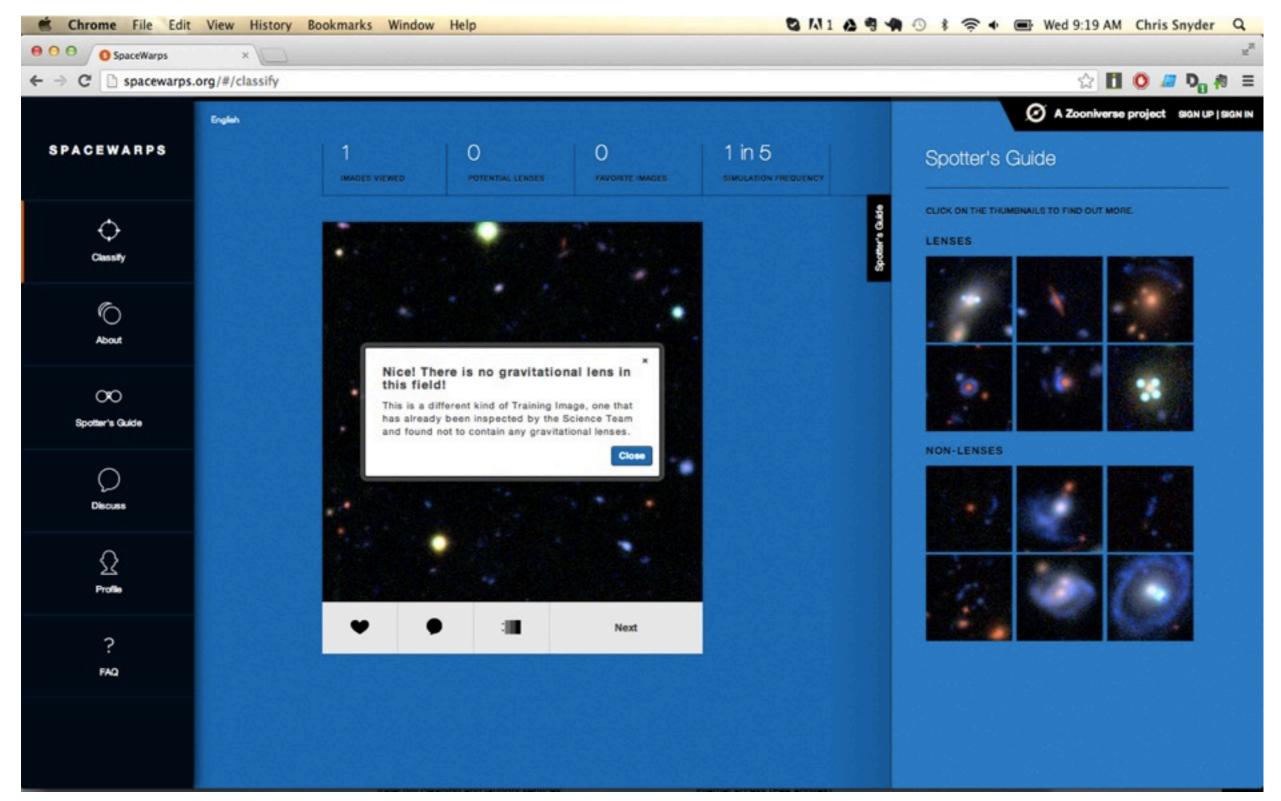




SUBJECT ALLOCATOR



Simulations



Tech

AWS, MongoDB, Redis, Coffeescript, localStorage, cookies, SVG, HTML5 Canvas, EC2, Ruby on Rails API, S3, ELB, Hadoop, ES6, Ubuntu, CSS3, Heroku, Clojure, etc..

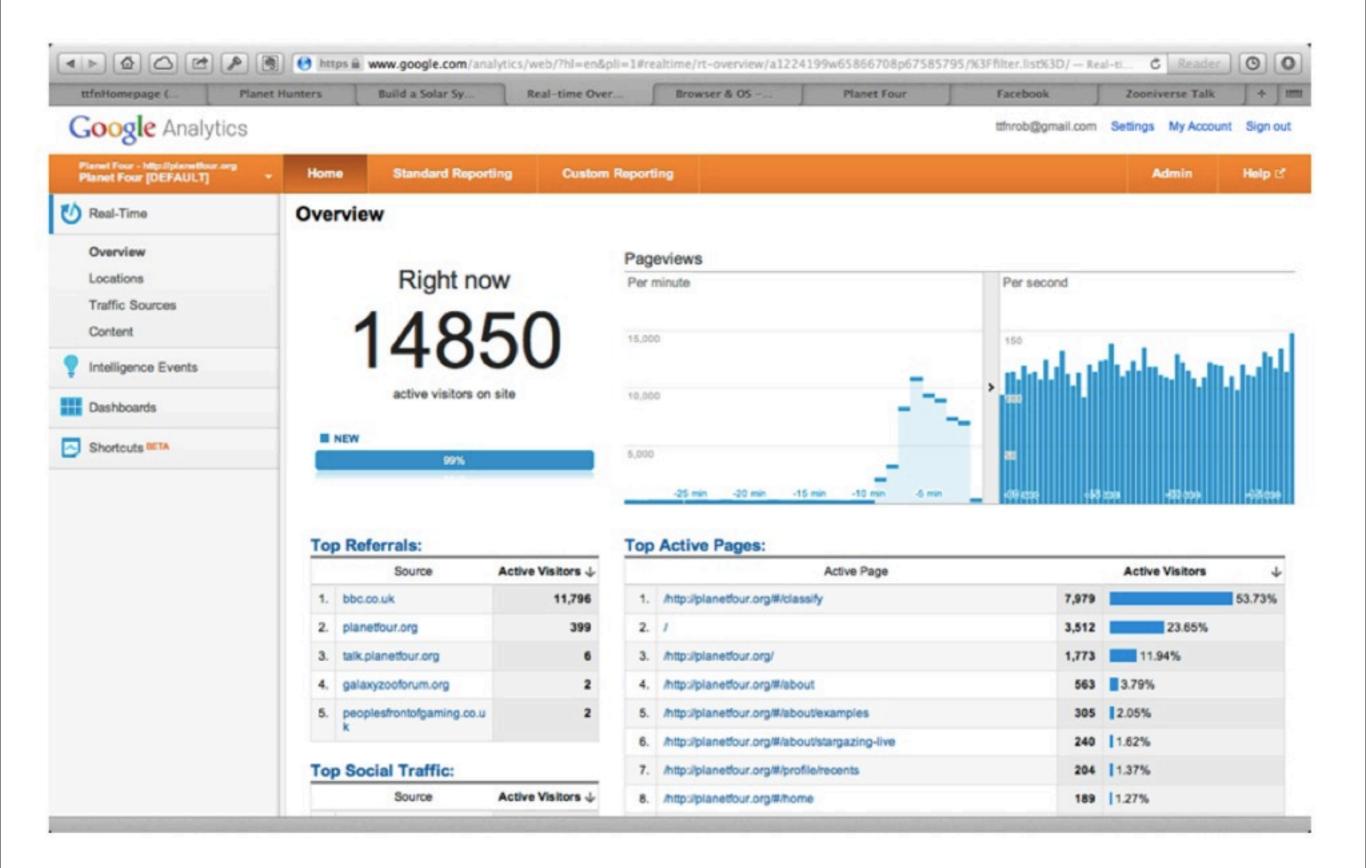


ubuntu®



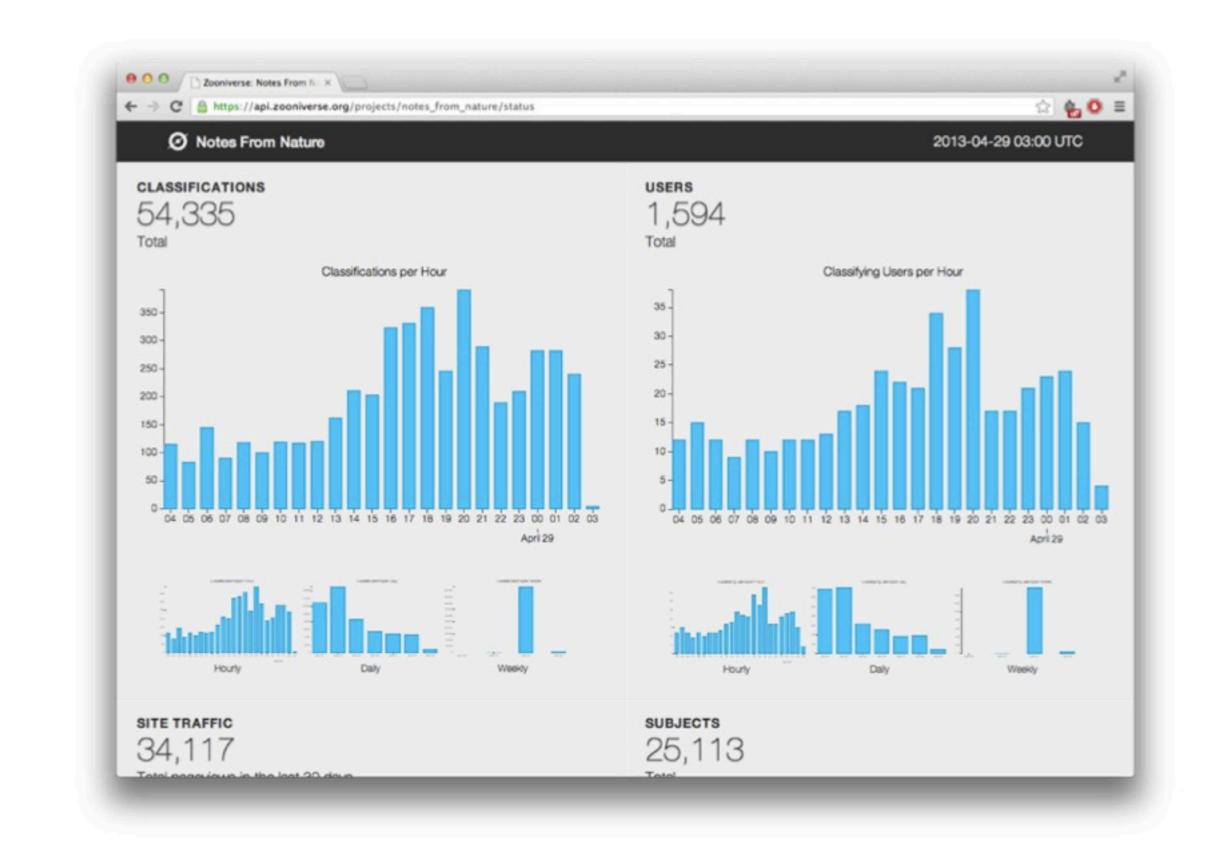




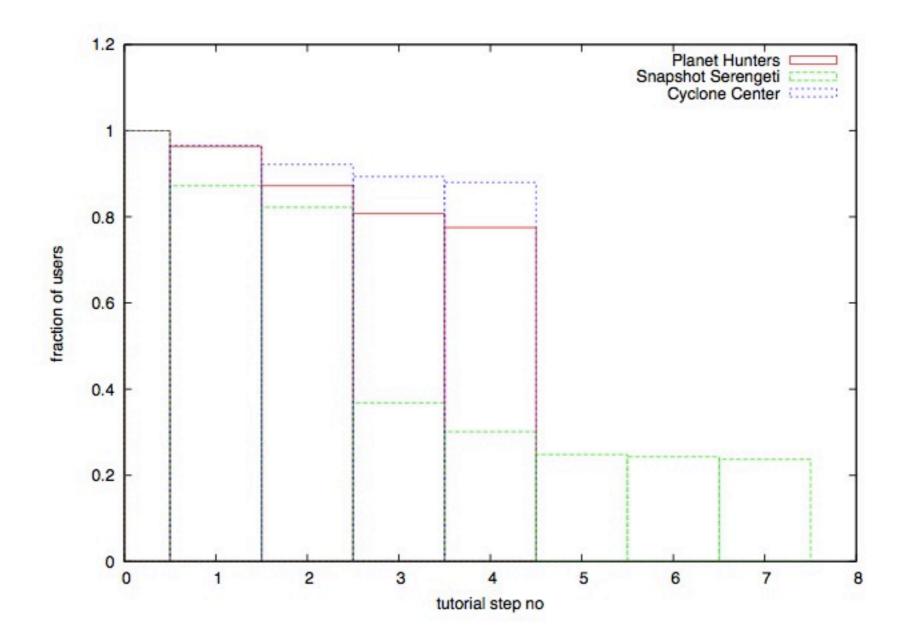


(and science!)

Data Driven

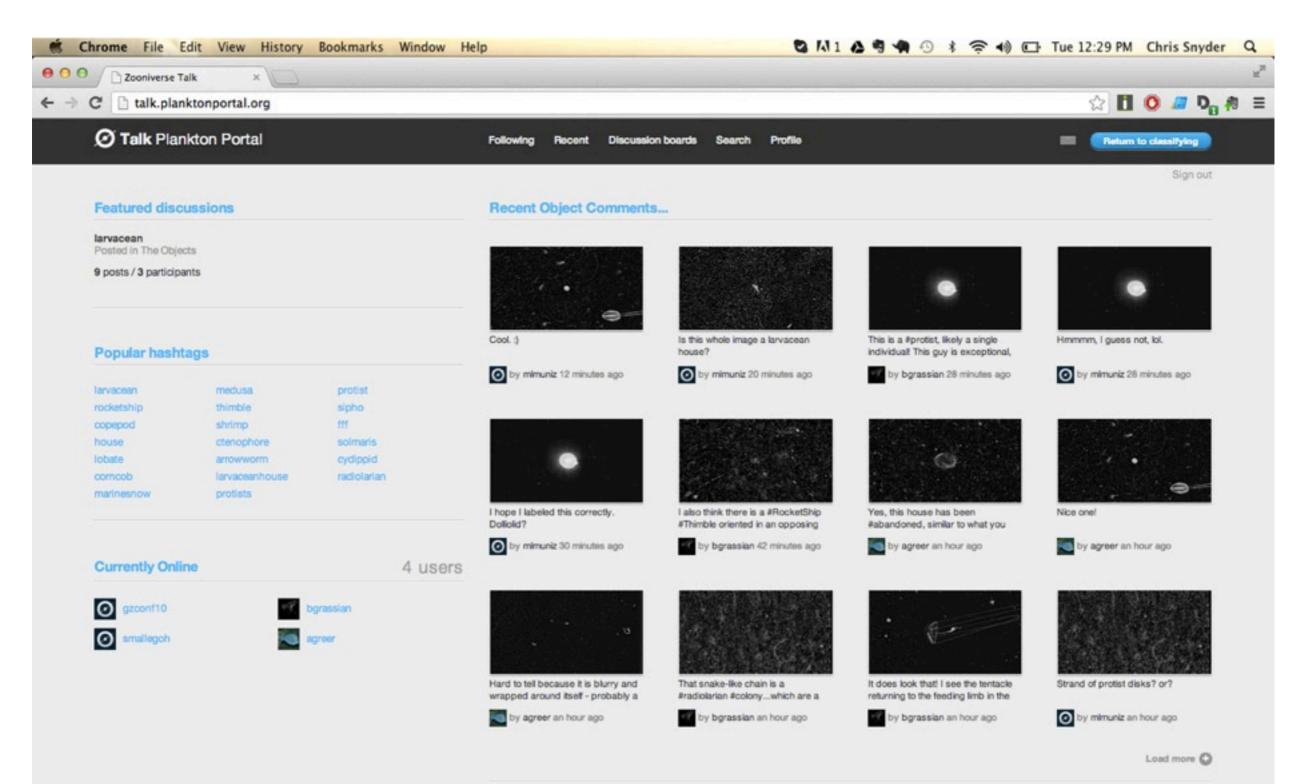




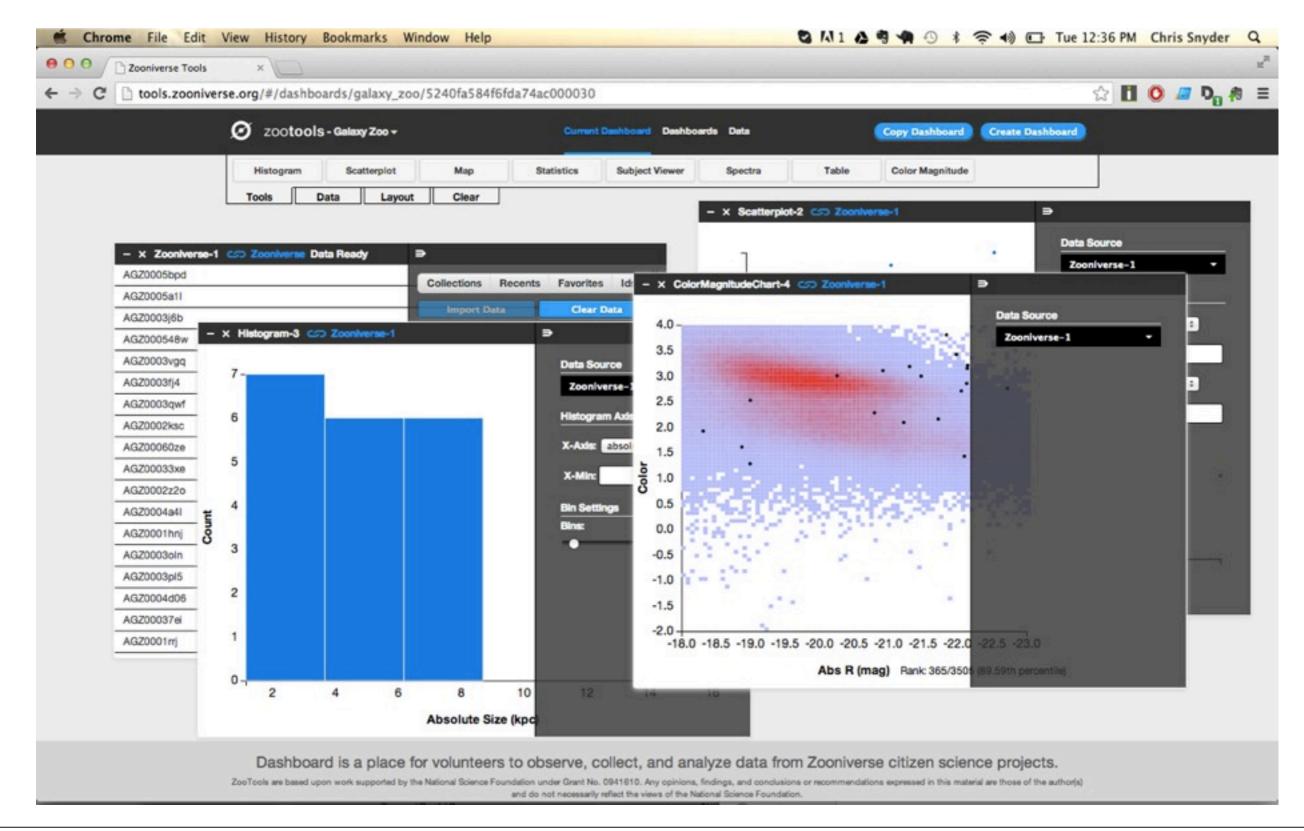


Tools

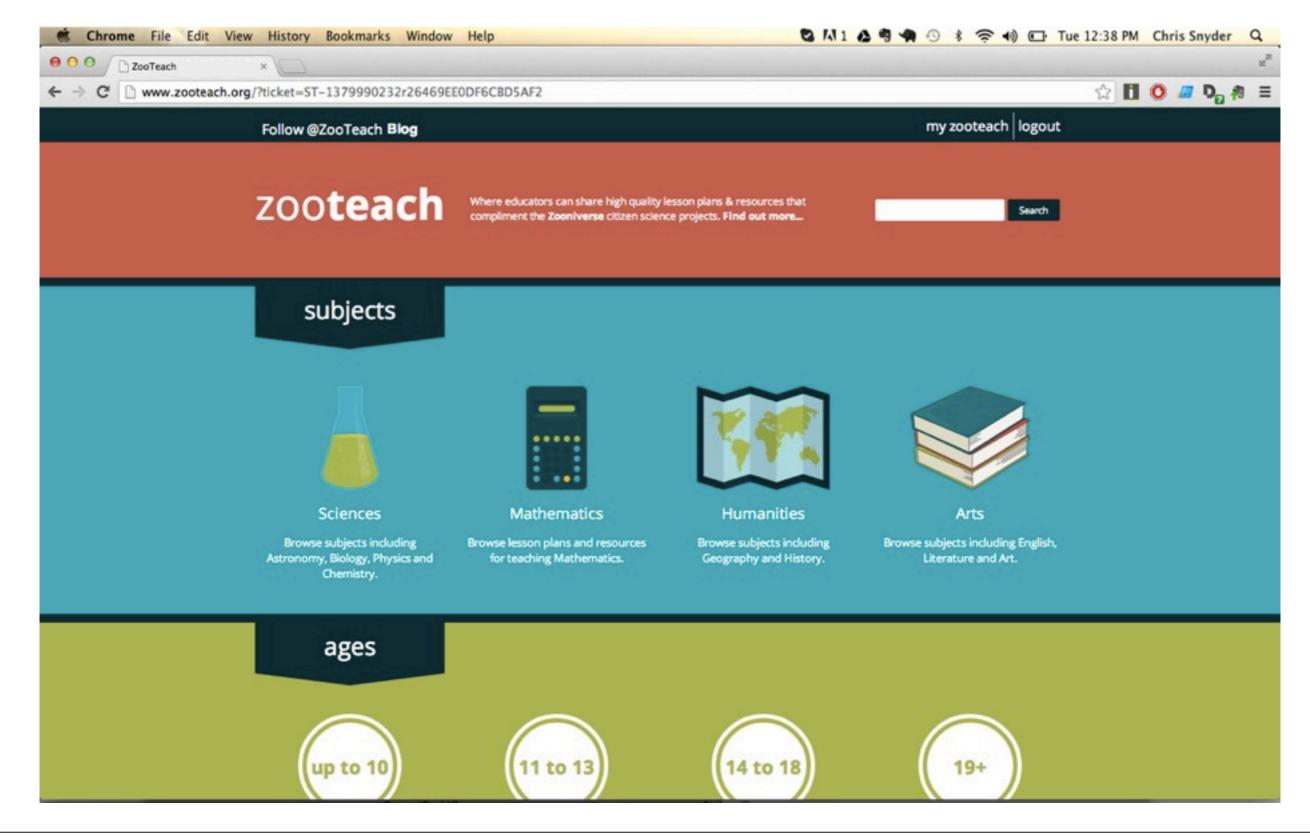
Talk



Tools



Teach



Groups

Chrome Fil	le Edit View History Bookmarks Window Help		S 141 1 2 3 4 3 1 2 Tue	2:40 PM	Chris Snyde	er Q
000 User G	roups Test ×					x ^R
← → C 🗋 gro	ups.zooniverse.org			☆ 🗖	O 🖪 D.	# ≡
	zooGroups			881 0	bumishne sow our	· · · ·
	Current Group		Create Group			
	Zooniverse Education		Group Name			
	Leave Group		Is this group intended for classroom use?			
	Zooniverse Education					
	Link: http://groups.zooniverse.org/#/sweet_sands_0	1				
	cyclone_center kellinora: 3					
	galaxy_zoo					
	brian-c: 5 bumishness: 8	akapadia: 5	kellinora: 48			
		AdaKepler: 21				
	galaxy_zoo_starburst kellinora: 3					
	leaf					
	parrish: 1	brian-c: 1				
	notes_from_nature bumishness: 3					
	sea_floor kellinora: 14	bumishness: 1				
	serengeti					
	akapadia: 1	kellinora: 35	bumishness: 2			
	spacewarp					
	akapadia: 4					
	You are in this group!					
	prot group					
	F 9k					

SoonTM

When is a subject complete?

Who is the best person to look at this subject?

How likely is someone to leave the site in the next five minutes?

What task is this person best at?

How well is this person performing compared to previous sessions?

Thanks!

Chris Snyder cs@zooniverse.org

Wednesday, September 25, 13