Qualia

• Share | Share on email Share on twitter Share on facebook

Zooniverse lets citizen scientists analyze large datasets

October 8, 2012 | Author: Summer Allen, Graduate and Postdoc, Brown University



If you haven't checked out the <u>Zooniverse</u> website yet, it's definitely time to do so. Zooniverse is a collection of several different citizen science projects that use the public to analyze large datasets.

With these projects, the average Joe and Jane can categorize galaxies with images from Hubble, explore the surface of the moon, record explosions on the sun, investigate the lifecycles of stars, use warship logs to model climate change, classify tropical storm data, help read Ancient Greek texts, analyze whale calls, explore the ocean floor, and decode bat calls.

Some scientists can't imagine letting other scientists analyze their datasets—let alone a hoard of strangers. What are the advantages of using crowdsourcing to analyze data? The Zooniverse website points out several reasons why this is a genius approach for certain types of data. For one, it's simply more personpower—it is easier (or even just possible) to categorize thousands of images if you have thousands of people helping you. Second, because multiple people are looking at every image or sound file, it is easier to quantify error. You may be wondering why these researchers don't just use computers to analyze their data. In fact, many of these projects also use machine learning and actually use the citizen science derived data to train the algorithms. But my favorite reason to use citizen science in projects like this is the chance of finding something completely unexpected— "serendipitous discovery" as the website calls it—whether it be unexpected conclusions from analyses or simply the result of a "hey, what's that?" inquiry.

Getting people involved with citizen science projects is a large educational opportunity. While performing the tasks involved in these projects, people are learning about science and they are invested in science. They will probably look at the night sky or the ocean differently, share their research with their friends and family, and maybe even pick up the phone to call their congressperson when funding for the National Science Foundation or NASA is on the chopping block.

Zooniverse is always expanding its collection of projects and looking for new research teams to partner with (bioinformatics anyone?) so take some time to check out the website—perhaps while waiting for your own experiments to run.