Scientific Animal Image Analysis
SANIMAL

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UofA Jaguar and Ocelot Monitoring Project:

- Address challenges in managing data for citizen science projects that have <u>camera traps</u>
- Not many applications available for coordinating users, file permissions, sharing etc. especially to hide sensitive data (GPS location of Jaguar etc.)
- Provides ways to easily clean, tag and bulk upload image data from SD cards
- Metadata is important for training the deep learning models (Faster R-CNN etc.)
- Goal is to make it <u>easier to locate and curate rare images and observations</u>, identifying them using deep learning techniques integrated into the upload pipeline
- Make it easier to build better models

How it works

- User gets a CyVerse Account
- Project manager gives permission to authorized users to specified directories in CyVerse Data Store (iRODS)
- User downloads SANIMAL java app (uses Jargon)
- User collects SD card from traps and uploads data (after curating, and QA/QC)
- iRODS rules take uploaded metadata and apply AVU to files
- Sensitive data get restrictive permissions and is not visible to others.

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Sanimal Goal 1

- Reduce the time it takes to sort or "tag" photos taken by camera traps utilizing JavaFX

Sanimal Goal 2

- Ensure the software is cloud driven using CyVerse to ease collaboration

Sanimal Goal 3

- Supply output in a standard format (CSV) to be processed and visualized easily

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