



BATALOG

PROGRESS REPORT #1

GROUP MEMBERS

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BACKGROUND

- Clean
- Cluster
- Catalog
- Display
- Predict

Bat scientists at UNCG record bat calls from all over the state. Doing research on these calls can require years of manual work. Batalog seeks to do that automatically in a web interface, using deep learning techniques to catalog bat calls

PROJECT REQUIREMENTS

Functional

- At least 90% accuracy
- Display the data in a meaningful way
- Pretty, functional website
- Allow the user to upload zero-crossing files for analysis
- Output the results of the analysis

Usability

- Web based graphical user interface
- Performance - low priority

PROJECT REQUIREMENTS

System

- Capable of running a modern browser
- Stable internet connection
- Database - 50 GB of storage

Security

- Username/password to use tool
- Need more communication with Biology Dept for other specifications

PROJECT SPECIFICATION

AREA

- Machine Learning
- Web Development
- Database Management

DEVELOPMENT ENVIRONMENTS

- Jupyter Notebook
- Atom
- Sublime Text

LIBRARIES

- TensorFlow + Keras API
- Numpy
- Matplotlib
- Dash
- Pillow 5
- Django 2

PLATFORMS

- Web

FRAMEWORK

- Django 2
- SQLite3
- Python 3

GENRE

- Research tool

SCRUM

1

SPRINT PLANNING

- Sprint goals
- Create sprint backlogs
- Decide how to achieve the sprint goal

2

SPRINT RESTROSPECTIVE

- Periodically take a look at what is and is not working

3

DAILY SCRUM MEETING

- What did you do yesterday?
- What will you do today?
- What obstacles are in your way?

| Sprint | ID | Backlog Item | Owner | Estimated | Friday | Saturday | Sunday | Monday | Tuesday | Wednesday |
|--------|---------|-----------------------------------|------------|-----------|--------|----------|--------|--------|---------|-----------|
| 1 | 1 Major | Understand the Code | Thien | 8.0 | 7 | 7 | 5 | 0 | 0 | 5 |
| 1 | 2 Major | Reasearch File interface | Thien | 10.0 | 10 | 9 | 8 | 0 | 0 | 8 |
| 1 | 3 Major | Research CNN | Kevin | 20.0 | 0 | 5 | 3 | 0 | 0 | 3 |
| 1 | 4 Major | Research CNN | David | 20.0 | 19 | 0 | 16 | 0 | 0 | 16 |
| 1 | 5 Major | Research Python, Jupyter Notebook | David | 10.0 | 9 | 6 | 3 | 0 | 0 | 3 |
| 1 | 6 Major | Requirement Doc | Everyone | 3.0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1 | 7 Major | Research file system | Rahim | 8.0 | 0 | 5 | 3 | 1 | 0 | 1 |
| 1 | 8 Major | Presentation | Everyone | 2.0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1 | | | Unassigned | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | | Unassigned | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | | Unassigned | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | | | Unassigned | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 |

SPRINT #1

- ZenHub issues.
- Research on Django web applications in python, and filesystem or file upload methods using Django.
- Researched convolutional neural networks (CNNs)



THANK YOU

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