

Deforestation Detector  
Sprint 2 Plan  
Completion Date: 02/08/2022  
Release Name: Deforestation Detector 1.0  
Revision 1 – 1/26/2022

**Goal:**

Preprocess data for deep learning model. Improve deep learning infrastructure efficiency. Create basic pages/navigation. Create a state management system. Finalize map model.

**Task listing, organized by user story:**

- (#37) As a user, I would like the data to be accurate, because misinformation can be more dangerous than ignorance. (Story points: 8)
  - Try a transfer learning model
  - Utilize transfer learning
  - Utilize model checkpoints
  - Plot a confusion matrix
- (#22) As a user, I would like to learn more about the problem in an information page so I can understand its importance. (Story points: 5)
  - Add feature list to exploration view
  - Add modal that explains each feature/provides call to action
- (#19) As a user, I would like to be able to see more about the experience in an about page, because it will allow me to understand its purpose. (Story points: 3)
- (#39) As a user, I want the data to be relevant to the purpose of the experience. (Story points: 13)
  - Preprocess image data
- (#31) As a user, I would like to know what contributes to deforestation, because then I can focus on contributing towards specific goals. (Story points: 3)
  - Interpret model results
  - View possible architectures from kaggle
- (#41) As a user, I want to be able to navigate the UI/experience intuitively, because otherwise I may miss information and/or get frustrated. (Story points: 5)
  - Create controls for exploration mode
  - Implement UI/UX for exploration/investigate views (transitions to/from one page to another)
- (#8) As a user, I would like to arrive at a landing page, because it would make the rest of the experience more accessible. (Story points: 3)

- (#16) As a user, I would like to be able to visualize the scope of today's deforestation because it will help me to understand its threat to my future. (Story points: 13)
  - Create Blender Map Model
- (#54) As a user, I would like the accuracy predictions to continually improve on any satellite images of the Amazon. (Story points: 13)
  - Image Augmentation
  - Optimize model checkpointing - cache in RAM
  - Utilize tensorflow distributed training
  - Find a proper loss function
  - Set up graphics card usage for model training
  - Switch to python files as opposed to jupyter notebooks
- (#32) As a user, I would feel more comfortable browsing a page with a professional-looking icon. (Story points: 1)

#### **Team roles:**

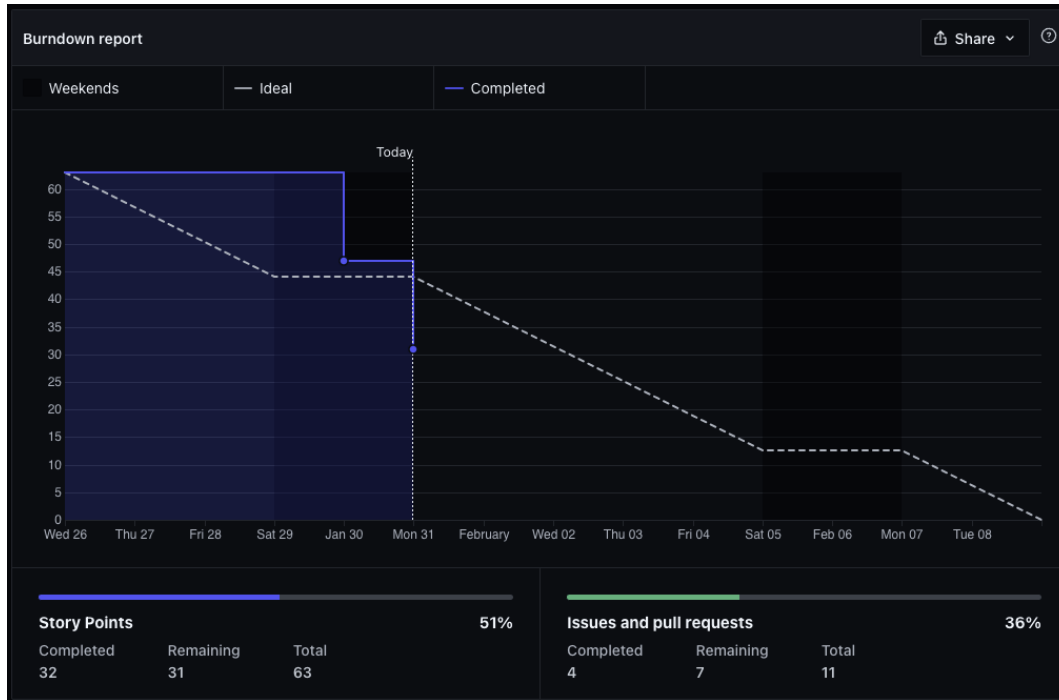
- Sam Edwards-Marsh
  - Product Owner
- Christopher Sterza
  - SCRUM Master
- Donovan Henry
  - Developer
- John Beresford
  - Developer
- Giovanni Ochoa
  - Developer

#### **Initial task assignment:**

- Sam Edwards-Marsh
  - As a user, I want the data to be relevant to the purpose of the experience.
    - Preprocess Image Data
- John Beresford
  - As a user, I would like to be able to visualize the scope of today's deforestation because it will help me to understand its threat to my future
    - Create Blender Map Model
- Donovan Henry
  - As a user, I want the data to be relevant to the purpose of the experience.
    - Preprocess Image Data
- Christopher Sterza
  - As a user, I would like to see an indication of the loading progress of the page, because large media can take many seconds to load and I don't want to be stuck with a blank screen.
  - As a user, I would feel more comfortable browsing a page with a professional-looking icon.

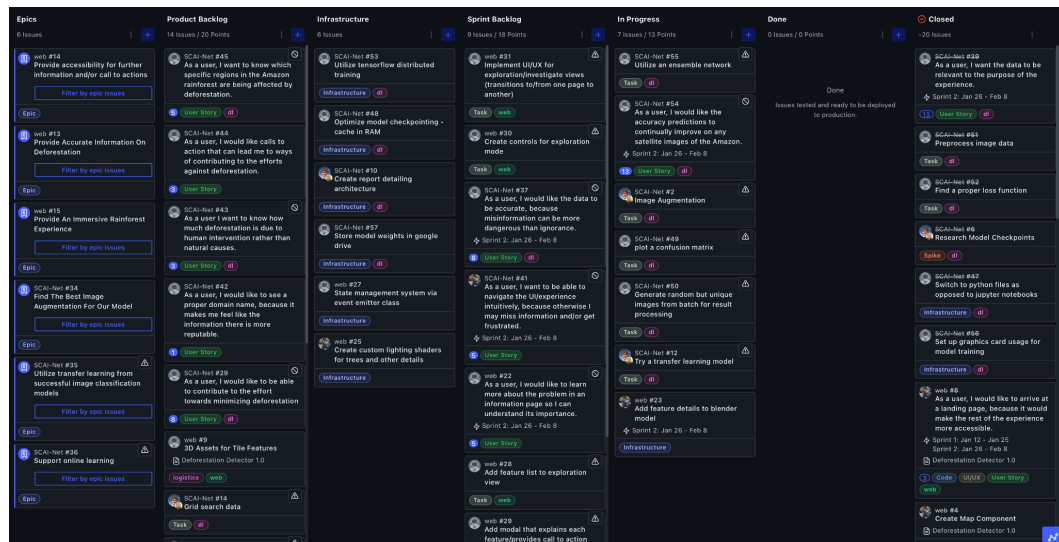
- Giovanni Ochoa
  - As a user, I would like to be able to see more about the experience in an about page, because it will allow me to understand its purpose.

Initial burndown chart: [Online Burndown Report](#)



Initial scrum board:

<https://app.zenhub.com/workspaces/b-team-61e8d10e780706001425c8a1/boar>



**Scrum times:**

- Meeting time with TA:
  - Tuesday (7:15-8am)
- Group meeting days (hours):
  - Monday (7-8pm)
  - Wednesday (7-8pm)
  - Friday (7-8pm)