# Allsky Camera Network for Detecting Bolides

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## Task Matrix (Milestone 2)

Task	Completion	Tyler	Vincent	Jean-Pierre	Charles
Continuously fix endless stream of issues	90%	20%	20%	40%	20%
Add logs for easier diagnosis of issues	100%	0%	90%	0%	10%
Replace current C++ camera code	70%	30%	50%	20%	0%
Implement Server API	90%	70%	5%	25%	0%
Implement Client API	80%	10%	0%	50%	40%
Begin writing CLI	0%	0%	0%	0%	0%
IoT Style Setup	90%	20%	0%	.30%	50%

Continuously fix endless stream of issues -> Notification system bug and time zone bug fixed

Add logs for easier diagnosis of issues - > Logs are chunked and queryable

Replace current C++ camera code -> Switched to augmentation and background subtraction

Implement server API -> Wrote and tested routes for server API

Implement client API -> Wrote and tested routes for client API

Begin writing CLI -> On hold until client is implemented and we have more events

IoT style setup -> Components are built but they still need to be glued together

### **Client + Server Demo**

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## **Client API**

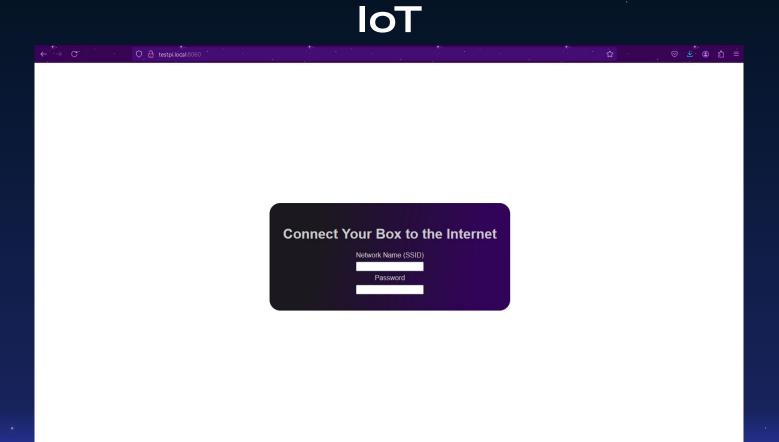
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## **Contribution of Each Member**

#### Tyler Turner

- Server API endpoint implementation
- Video processing queue implementation
- Notification service implementation

#### Vincent Quintero

- Rewrote event detection software
- Improved image processing
- Improved event detection algorithm
- Event logging for recordings and processing

## **Contribution of Each Member**

#### Jean-Pierre Derbes

- Fixed None/null errors in node state fields
- Implementation of server and client API endpoint handlers
- Database design and implementation

#### Charles Derbes

- IoT style setup
- Client API endpoint implementation
- Logging for node/client processes

## Task Matrix (Milestone 3)

Task	Tyler	Vincent	Jean-Pierre	Charles
Replace current C++ camera code	10%	35%	45%	10%
Implement Server API	50%	0%	50%	0%
Implement Client API	20%	0%	20%	60%
Begin writing CLI	30%	10%	50%	10%
IoT style setup	20%	0%	10%	70%
Classification	0%	33%	33%	34%
Start writing UI	20%	70%	0%	10%
Create setup process for node	75%	•0%	25%	0%

#### Task 1: Replace current C++ camera code

- Event triggering + recording: C++ -> Python
- Detection algorithm and image processing improved
- Client side recording chunking

#### Task 2: Implement Server API

- Missing functionality on a few endpoints
- Need to stress test server with expected video sizes

#### Task 3: Implement Client API

- One endpoint handler needs implementation
- Need to test client api integration with server

#### Task 4: Begin writing CLI

- Enough data to start CLI
- CLI exposes internal system functionality
  - Generate composites
  - Classify composites + classification report

#### Task 5: IoT Style Setup

- FastAPI + HTML + CSS + JS
- Edge cases need to be solved
- Communication with server API

#### Task 6: Classification

- Binary Classifier
- Need to augment data through transforms and simulations
- Tune CNN

#### Task 7: UI

- On hold until until client and server infrastructure is implemented and well tested
- UI mockups will be modified based on feedback from past presentations

#### Task 8: Node Setup Process

- Workflow to set up and test newly built node
  - Install OS + required packages
- Ansible to manage node updates
- Easier to diagnose node issues

## Thanks!