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Report and Plan

Progress Report

* Bootcamp
	+ Three independent parts
		- API/Data collection - gets data from TrafficLand API and store the image information in the database as well as create API to connect to the database
		- Machine Learning - be able to detect cars in a single image, sending detections to API, beginning color detection
		- Front end - have a tool that can display an image of a car with its labels, already stored somewhere, and get information manually about the car (without the API)
* 30%
	+ Integration
		- Frontend and Backend services integrated on local database system
		- Usage of image and camera logistics API to display the latest downloaded image from TrafficLand services
	+ Machine Learning
		- Able to detect cars
		- Able to download images from API
		- Run Car detection on images and output bounding boxes
		- Working on color and size detection
* 40%
	+ Machine Learning
		- Honing color/ size detector to give us a better distinction
		- There is a pipeline between the API and the machine learning
			* machine-learning can get images and cameras from the API, and can send bounding boxes/detections to database with POST request
	+ Data Collection:
		- Using a NoSQL database instead of SQL so that the JSON is retrieving document data instead of converting it
			* Will result in faster API collection
	+ Front-end:
		- All the camera metadata will be added to the frontend web app
		- This includes orientation, location, full name, last updated time, etc

2-week plan

* 1st week:
	+ Data Collection
		- Have image data collection optimized to be faster than our 40% demo
		- Have all the endpoints for the API for machine learning to POST bounding boxes
	+ Front-End
		- Integrating the detected images into the frontend
		- Integrating the detected car labels in table format into the frontend
	+ Machine Learning
		- Good color detection results → Better than our 40%
* 2nd week:
	+ Integration:
		- Server logistics → will take time to set up a live server
			* Want to instead have everything locally
		- Will have fully integrated local version
			* Ready to deploy once we get the server set up
	+ Data Collection
		- Have image data collection optimized to be faster than our 40% demo
		- Have all the endpoints for the API for machine learning to POST bounding boxes
	+ Machine Learning
		- Sending all information to Database and pulling information from the database in one place
		- Starting height detection
	+ Front-End
		- Start creating initial queries for car detection EDA (exploratory data analysis)