Members:

Name	Primary Role	Secondary Role(s)
Dr. Diane Rover	Advisor	Client
Jazzlyn Jacobus	Project Lead	Embedded System Lead
Benito Moeckly	Machine Learning Lead	Cybersecurity Team
Caleb DeBoef	Electrical Systems Lead	Embedded Systems Team
Jose Garcia	Cybersecurity Lead	Machine Learning Team

Week 10-11 Updates:

- Design Changes:
  - Add branding to front-end elements.
    - Streaming portal updates
    - Command GUI updates
  - Model and user authentication:
    - Added database design to host all DeepRacer models to allow students to compare and analyze their models with one another.
    - Need to finalize authentication method for students, this could be:
      - Asymmetrical keys
      - One common user (like library computers)
      - Netid implementation

- Requirements Changes:
  - Access and authentication must be easy enough for students to access their files on the VMs containing their models, without providing a burden to the administrators of the course.
  - Front-end product must be on brand, with a cohesive color scheme

- General Accomplishments
  - Through vigorous testing, we've determined the best way for students to access and use our platform is through a VM hosted on our campus computers.
    - This would remove the need to install dual-boot measures on lab computer.
    - Also makes it as simple as installing our GUI application to control and execute training processes on our platform.
  - GUI Functionality

- Created SSH capabilities for GUI to remotely start and stop training.
  - Initialization Package
    - Added functionality to hash container core files to see if there are any missing files, missing files will then be pulled from our repository.
  - Streaming Viewer
    - The training streaming viewer has been given a facelift, with additional control and metrics for students to view information about their model.
  - Prelab
    - Created Prelab document to allow students a way to see simple code for parameter estimation
    - This code and information in the prelab should give the students a good introduction to machine learning as a concept before diving into the lab

Individual Contributions:

Name	Contribution	Weekly Hours	Total Hours
Jose Carlos Garcia	**Updated security design, narrowed down scope to students accessing VM, added additional features to our front-end solution**	**~10**	**80**
Jazz Jacobus	**Updating Design Documents to fit new project direction, creating new hardware diagram, Investigating source code of DeepRacer, working on "Follow the Leader" Lab**	**8**	**73**
Caleb DeBoef	**Created a prelab code document to allow students to experiment with simpler machine**	**~7**	**68**

Name	Contribution	Weekly Hours	Total Hours
	learning as well as added more technical information to the prelab section of the document.		
Benito Moeckly	**Implemented GUI SSH capabilities.**	**~9**	**65**

Open Issues:

Issue	Status	Assigned To	Notes
Update Prelab Section of Document	**In Progress**	**Caleb Deboef**	The prelab document has been updated with examples of parameter estimation to help with understanding as well as a script. More needs to be added and edited to both the lab and prelab to help further explain more complex topics
Physical DeepRacer Test	**In progress**	**All**	With the physical track created, we are now planning to test the real-world functionality of the bot and compare to the simulation.
Initialization Package	**In Progress**	**Jose Carlos Garcia**	To ease the use of our platform we're implementing an initialization app to check files, start services, and update software if needed. Missing a front-end GUI, scripts are done.
OpenVino Lab	**In Progress**	**Jose Carlos Garcia**	Introduces students to the world of ML models, showing the relation between inputs and outputs on trained models.

Issue	Status	Assigned To	Notes
			Missing implementation into platform.
Follow the Leader Lab	**In Progress**	**Jazz Jacobus**	Introducing students to how else the DeepRacer can be used besides just racing. The deepracer will be able to detect a person and follow them around.
Platform Authentication	**In Progress**	**Jose Carlos Garcia**	Determine best authentication method for VM platform, implement changes. Determined we'll use VMs with the DeepLearner platform installed and allow students to access the ML tools this way. Now that this is figured out, we'll test a few different implementations to see which is easiest and is the best practice.
Training GUI	**In Progress**	**Benito Moeckly**	Need to do some fine-tuning: Make color scheme match the training view, fine transfer capabilities, add more options

Upcoming Plans

- Successfully run a physical model on built track
- Finish first drafts of Lab documents
- Finalize branding changes for both the GUI and model stream viewer.
- Need to update design documentation to reflect new security implementations, GUI, and initialization package.
- Finalize security experiments to determine best route for access.
- Finish Follow the Leader Lab