CS491 – Autonomous Vehicle Design

Engineering Notes No. 10.2

INFORMATION

NAME: Davian Rosario-Ortiz

DATE: 02/26/25 - 03/04/25

Sprint: 10

JIRA BACKLOG

Responsible for:

- Supporting setup of Quentin's model (Scenic-Sumo Test Cases).
- Focusing on simulation functionality and documentation.
- Assisting with final SDD/SDS document updates.
- Managing transition away from PolyVerif to Scenic-Sumo
- Reviewing resources and documenting mission planning efforts.

Contributed to:

- Setting up Scenic-Sumo model on workstation in MP 224.
- Verifying basic functionality of Scenic test simulation.
- Organizing and updating documentation to align with new direction.
- Confirming login credentials and installed dependencies.
- Testing NEAT integration in new model environment.

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RESOURCES & DOCUMENTS CONTRIBUTED TO

Table 1 - Contributions

Date	Resource/Document	Location	Contribution Description
02/27/2025	Scenic-Sumo model	MP 224	Transferred and initialized system setup.
02/28/2025	SDD Document	One Drive	Began incorporating machine-learning based tasks.
03/04/2025	NEAT Test File	MP 224	Validate execution of NEAT-based test simulation.
03/04/2025	Mission Planning Notes	One Drive	Compiled relevant resources and planning tasks.

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COMPONENTS TESTED

Table 2 - Testing

Date Tested	Component	Result	Comments
02/27/2025	Scenic Test Sim	Working	Lacks texture mesh, otherwise functional.
03/04/2025	NEAT Test file	Running	Integration functional, initial tests completed.

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PROBLEMS SOLVED

Table 3 - Solutions

Date	Problem	Solution & Notes
02/27/2025	Scenic Installation incomplete	Scenic working, SUMO pending installation.
03/04/2025	PolyVerif abandoned	Shifted focus to Scenic-Sumo with machine learning.

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PROBLEMS TO ADDRESS NEXT

Table 4 – Future Problems

Problem	Description
SUMO installation	Complete SUMO setup to enable full Scenic-SUMO functionality.
Scenic-Sumo test cases	Develop and implement driving scenarios in simulation.
ML reaction simulation	Enable system to react dynamically to stimuli using ML models.

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MEETING NARRATIVE NOTES:

Table 5 – Meeting 1

02/27/2025	Meeting Type: In-Class (MP 224)
Met with Product Owner(s): N	
Problems Brought Up:	

Problem	Proposed Solution
Scenic-Sumo setup and access	Begin fresh setup with updated credentials.
SDD updates for new direction	Refocus on machine learning and NE tasks.

Other Items Updated on:
Documented System login and resources for setup.

Additional Notes:
Scenic-Sumo test sim lacks mesh but executes.

Table 6 – Meeting 2

03/04/2025	Meeting Type: In-Class (LB 374)
Met with Product Owner(s): Y	
Problems Brought Up:	

Problem	Proposed Solution
Finalize SDD/SDS edits	Edit annotated SDD and integrate AI shift.
Mission planning requirements	Begin outlining Scenic-based planning resources.
Real-time model behavior	Coordinate with Quentin on data-driven features.

Other Items Updated on:
NEAT test case running successfully.

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Additional Notes:
Explore OpenStreetMap for 2D mapping support.

NOTES: