RETROSPECTIVE SPRINT I

24-10-2025

Team04 - DrivaPi

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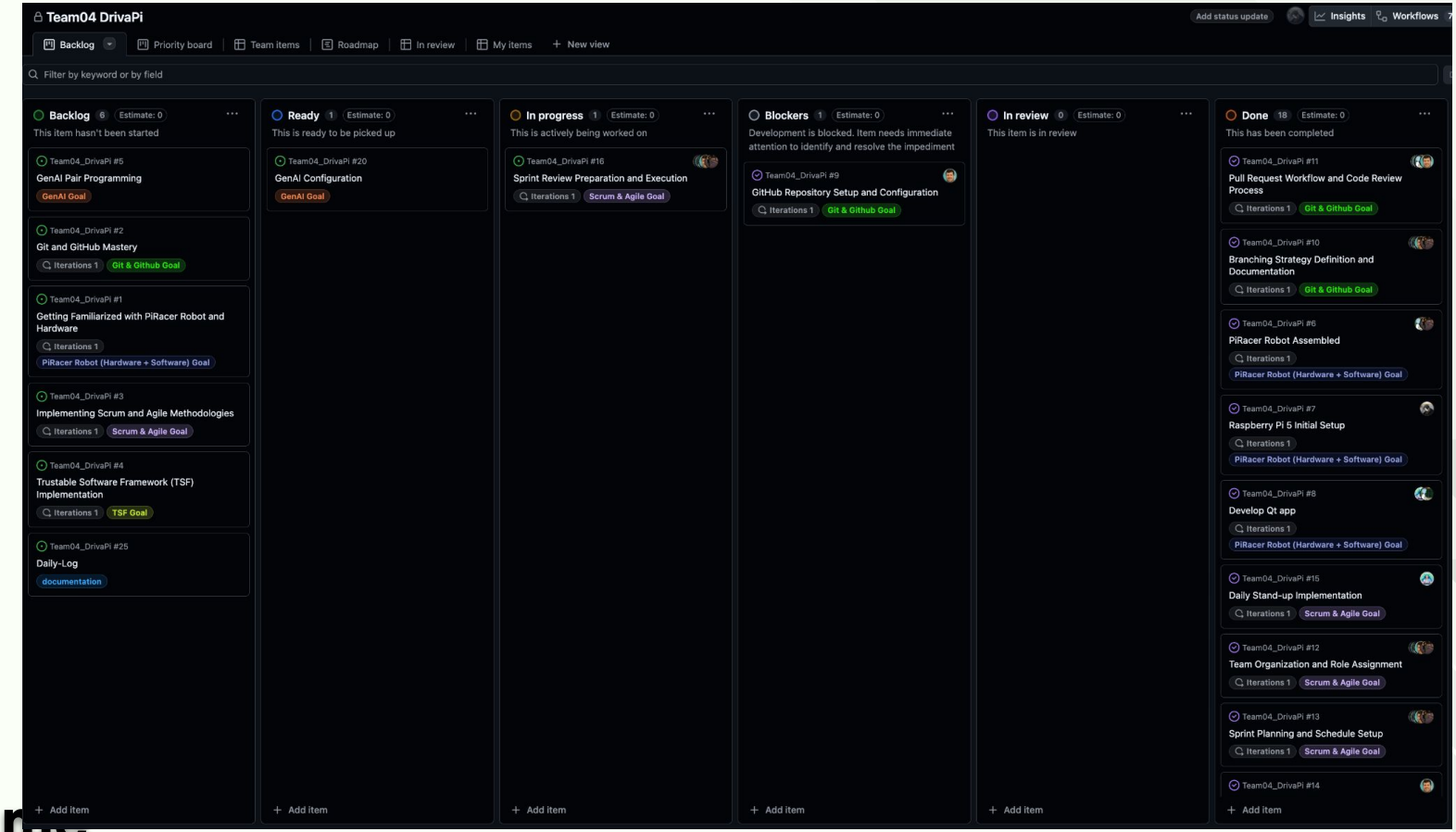
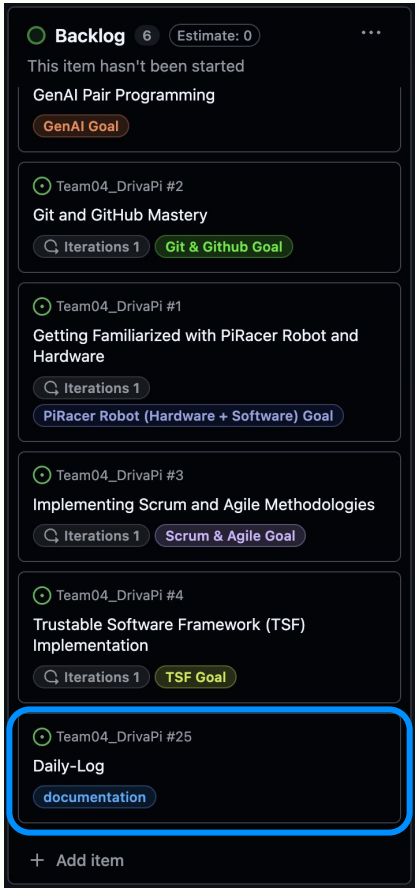
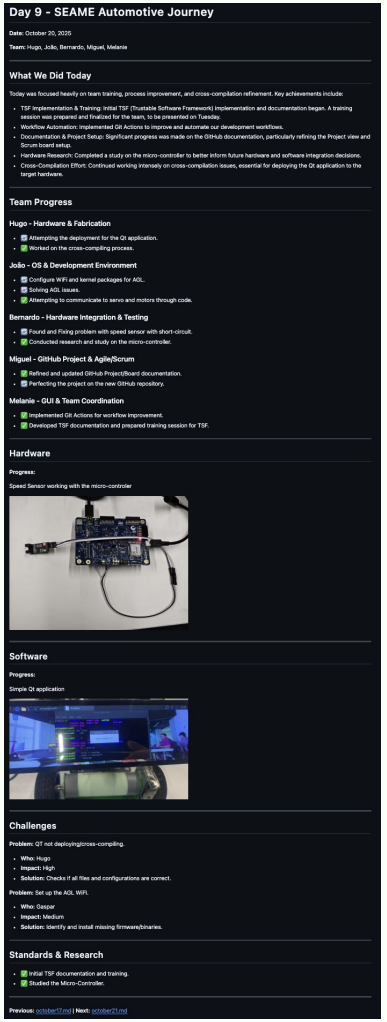
Overview


Team04 DrivaPi
Add status update
Insights
Workflows
Backlog
Priority board
Team items
Roadmap
In review
My items
New view
Filter by keyword or by field
Backlog 6 Estimate: 0
This item hasn't been started
Team04_DrivaPi #5
GenAI Pair Programming
GenAI Goal
Team04_DrivaPi #2
Git and GitHub Mastery
Iterations 1
Git & Github Goal
Team04_DrivaPi #1
Getting Familiarized with PiRacer Robot and Hardware
Iterations 1
PiRacer Robot (Hardware + Software) Goal
Team04_DrivaPi #3
Implementing Scrum and Agile Methodologies
Iterations 1
Scrum & Agile Goal
Team04_DrivaPi #4
Trustable Software Framework (TSF) Implementation
Iterations 1
TSF Goal
Team04_DrivaPi #25
Daily-Log
documentation
Add item
Ready 1 Estimate: 0
This is ready to be picked up
Team04_DrivaPi #20
GenAI Configuration
GenAI Goal
Add item
In progress 1 Estimate: 0
This is actively being worked on
Team04_DrivaPi #16
Sprint Review Preparation and Execution
Iterations 1
Scrum & Agile Goal
Add item
Blockers 1 Estimate: 0
Development is blocked. Item needs immediate attention to identify and resolve the impediment
Team04_DrivaPi #9
GitHub Repository Setup and Configuration
Iterations 1
Git & Github Goal
Add item
In review 0 Estimate: 0
This item is in review
Add item
Done 18 Estimate: 0
This has been completed
Team04_DrivaPi #11
Pull Request Workflow and Code Review Process
Iterations 1
Git & Github Goal
Team04_DrivaPi #10
Branching Strategy Definition and Documentation
Iterations 1
Git & Github Goal
Team04_DrivaPi #6
PiRacer Robot Assembled
Iterations 1
PiRacer Robot (Hardware + Software) Goal
Team04_DrivaPi #7
Raspberry Pi 5 Initial Setup
Iterations 1
PiRacer Robot (Hardware + Software) Goal
Team04_DrivaPi #8
Develop Qt app
Iterations 1
PiRacer Robot (Hardware + Software) Goal
Team04_DrivaPi #15
Daily Stand-up Implementation
Iterations 1
Scrum & Agile Goal
Team04_DrivaPi #12
Team Organization and Role Assignment
Iterations 1
Scrum & Agile Goal
Team04_DrivaPi #13
Sprint Planning and Schedule Setup
Iterations 1
Scrum & Agile Goal
Team04_DrivaPi #14
Add item

Daily Log





Day 9 - SEAME Automotive Journey

Date: October 20, 2025

Team: Hugo, João, Bernardo, Miguel, Melanie

What We Did Today

Today was focused heavily on team training, process improvement, and cross-compilation refinement. Key achievements include:

- TSF Implementation & Training: Initial TSF (Trustable Software Framework) implementation and documentation began. A training session was prepared and finalized for the team, to be presented on Tuesday.
- Workflow Automation: Implemented Git Actions to improve and automate our development workflows.
- Documentation & Project Setup: Significant progress was made on the GitHub documentation, particularly refining the Project view and Scrum board setup.
- Hardware Research: Completed a study on the micro-controller to better inform future hardware and software integration decisions.
- Cross-Compilation Effort: Continued working intensely on cross-compilation issues, essential for deploying the Qt application to the target hardware.

Team Progress

Hugo - Hardware & Fabrication

- ✅ Attempting the deployment for the Qt application.
- ✅ Worked on the cross-compiling process.

João - OS & Development Environment

- ✅ Configure WiFi and kernel packages for AOL.
- ✅ Solving AOL issues.
- ✅ Attempting to communicate to servo and motors through code.

Bernardo - Hardware Integration & Testing

- ✅ Found and Fixing problem with speed sensor with short-circuit.
- ✅ Conducted research and study on the micro-controller.

Miguel - GitHub Project & Agile/Scrum

- ✅ Refined and updated GitHub Project/Board documentation.
- ✅ Perfecting the project on the new GitHub repository.

Melanie - GUI & Team Coordination

- ✅ Implemented Git Actions for workflow improvement.
- ✅ Developed TSF documentation and prepared training session for TSF.

Hardware

Progress:

Speed Sensor working with the micro-controller

Software

Progress:

Simple Qt application

Challenges

Problem: QT not deploying/cross-compiling.

- **Who:** Hugo
- **Impact:** High
- **Solution:** Checks if all files and configurations are correct.

Problem: Set up the AOL WiFi.

- **Who:** Gaspar
- **Impact:** Medium
- **Solution:** Identify and install missing firmware/binaries.

Standards & Research

- ✅ Initial TSF documentation and training.
- ✅ Studied the Micro-Controller.

Previous: october17.md | **Next:** october21.md

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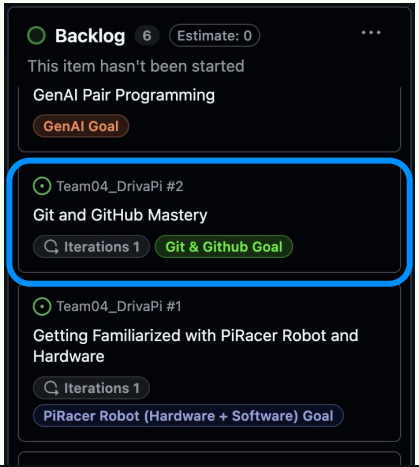
Git & Github



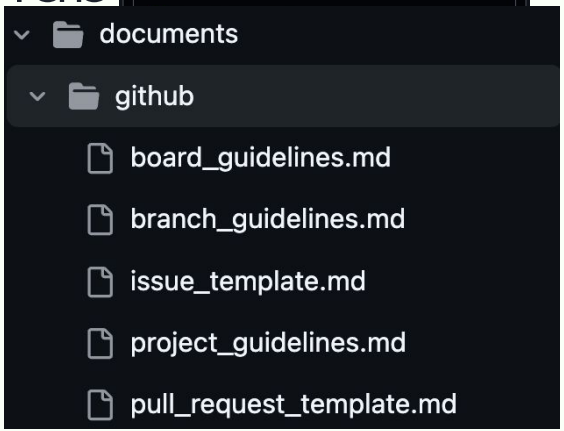
As a project stakeholder, I need robust version control and collaboration practices so that code quality is maintained, changes are tracked, and the team works efficiently without conflicts.

Acceptance Criteria

- [x] All team members proficient with basic Git operations
- [ ] GitHub repository properly configured (GitHub Repository Setup and Configuration #9)
- [x] Branching strategy defined and followed (Branching Strategy Definition and Documentation #10)
- [x] Code review process established (Pull Request Workflow and Code Review Process #11)

Definition of Done

- [ ] Repository structure established
- [x] First successful pull request merged
- [x] Team demonstrates version control proficiency



GitHub Repository Setup and Configuration #9

Parent: #2 • #36 • SEAME-pt/Team04_DrivaPi

Tasks

- [x] Create new GitHub repository
- [x] Add team members as collaborators
- [x] Configure repository settings
- [ ] Set up branch protection rules for main/master
- [x] Create .gitignore file appropriate for project
- [x] Add README file of the main project
- [x] Set up issue templates
- [x] Set up pull request template
- [x] Configure repository labels

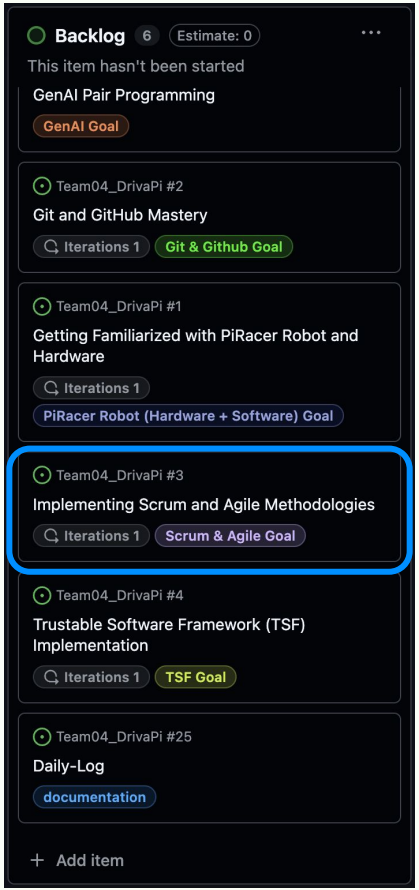
Acceptance Criteria

- [x] Repository created and accessible to all team members
- [ ] Branch protections prevent direct pushes to main
- [x] Repository structure clear and organized
- [x] README provides project overview
- [x] Templates facilitate consistent issues and PRs

Definition of Done

- [ ] Repository fully configured
- [x] All team members have access
- [x] Initial commit with project structure pushed
- [x] Documentation complete

Scrum & Agile



As a project stakeholder, I need the development team to follow structured Agile practices so that I have visibility into progress, predictable delivery, and continuous improvement.

Acceptance Criteria

- [x] Team organized with defined roles (Team Organization and Role Assignment #12)
- [x] Sprint cycles established and running (Sprint Planning and Schedule Setup #13)
- [x] Scrum ceremonies implemented and attended (Scrum Board Creation and Maintenance #14)
- [x] Scrum board actively maintained (Scrum Board Creation and Maintenance #14)
- [x] Team demonstrates understanding of Agile principles (Daily Stand-up Implementation #15)

Definition of Done

- [x] Scrum framework fully implemented
- [x] All team members trained on Agile practices
- [x] First sprint completed successfully
- [ ] Retrospective conducted with actionable improvements (Sprint Review Preparation and Execution #16)

TSF

Backlog 6 Estimate: 0

This item hasn't been started

GenAI Pair Programming

GenAI Goal

Team04_DrivaPi #2

Git and GitHub Mastery

Iterations 1 | Git & Github Goal

Team04_DrivaPi #1

Getting Familiarized with PiRacer Robot and Hardware

Iterations 1 | PiRacer Robot (Hardware + Software) Goal

Team04_DrivaPi #3

Implementing Scrum and Agile Methodologies

Iterations 1 | Scrum & Agile Goal

Team04_DrivaPi #4

Trustable Software Framework (TSF) Implementation

Iterations 1 | TSF Goal

Team04_DrivaPi #25

Daily-Log

documentation

+ Add item

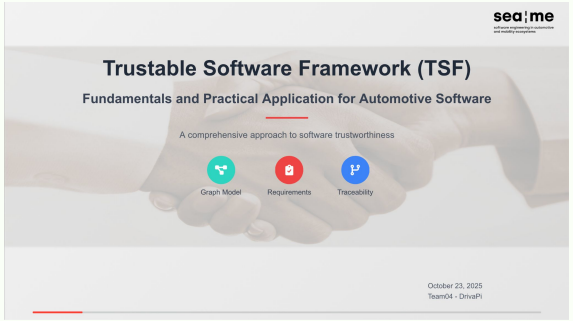
As a project stakeholder, I need the team to implement Trustable Software Framework practices so that the software meets automotive industry safety and reliability standards through proper requirements management, traceability, and verification.

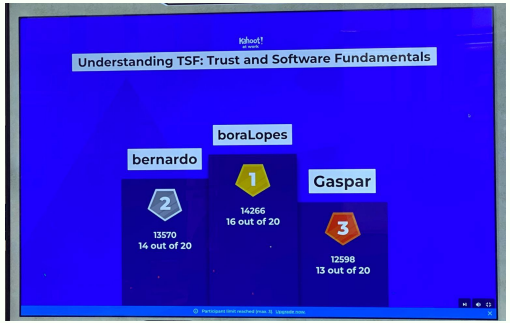
Acceptance Criteria

- [x] Requirements defined and documented (Requirements Definition and Documentation #18)
- [x] Traceability matrix established (Traceability Matrix Creation and Maintenance #19)
- [x] Software architecture documented
- [x] Documentation meets automotive standards

Definition of Done

- [x] TSF processes established and followed
- [x] Deliverables meet quality standards
- [x] Team demonstrates TSF competency (TSF Fundamentals and Automotive Standards Training #17)





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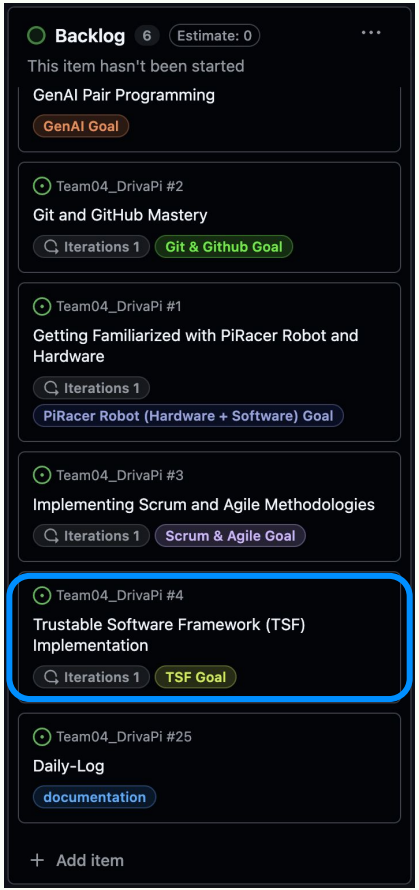
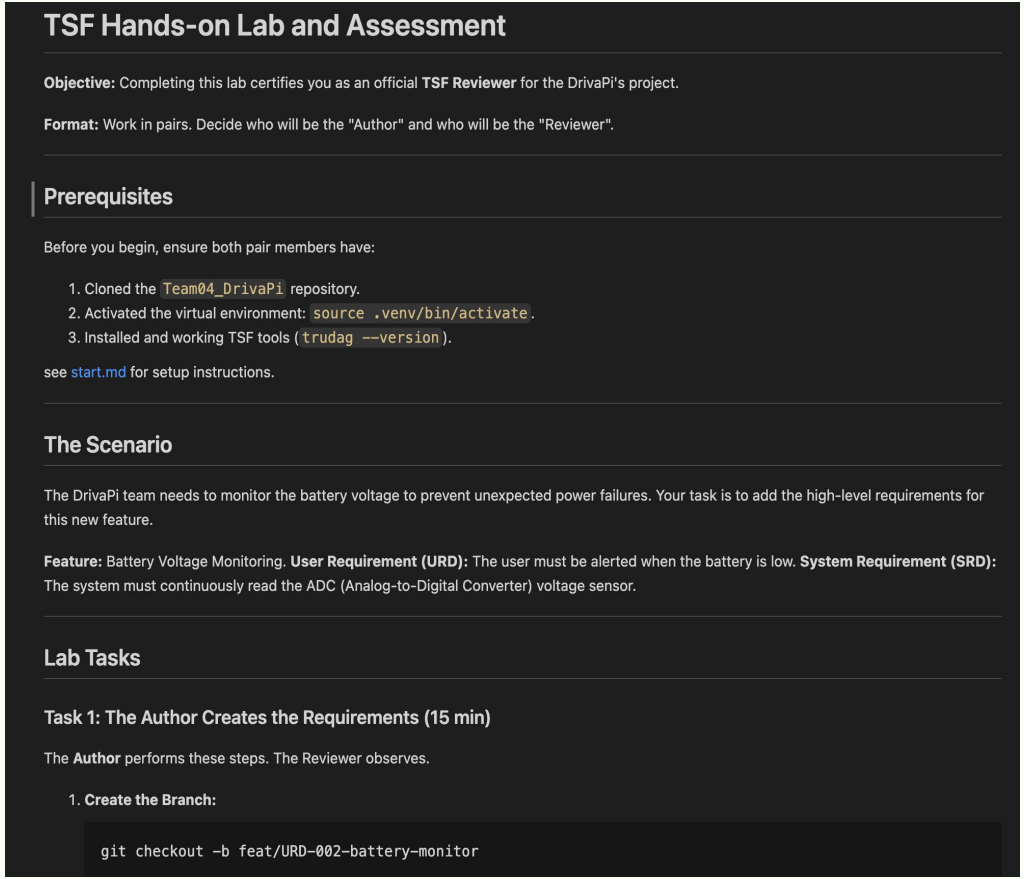
TSF





TSF Hands-on Lab and Assessment

Objective: Completing this lab certifies you as an official **TSF Reviewer** for the DrivaPi's project.

Format: Work in pairs. Decide who will be the "Author" and who will be the "Reviewer".

Prerequisites

Before you begin, ensure both pair members have:

1. Cloned the `Team04_DrivaPi` repository.
2. Activated the virtual environment: `source .venv/bin/activate`.
3. Installed and working TSF tools (`trudag --version`).

see start.md for setup instructions.

The Scenario

The DrivaPi team needs to monitor the battery voltage to prevent unexpected power failures. Your task is to add the high-level requirements for this new feature.

Feature: Battery Voltage Monitoring. **User Requirement (URD):** The user must be alerted when the battery is low. **System Requirement (SRD):** The system must continuously read the ADC (Analog-to-Digital Converter) voltage sensor.

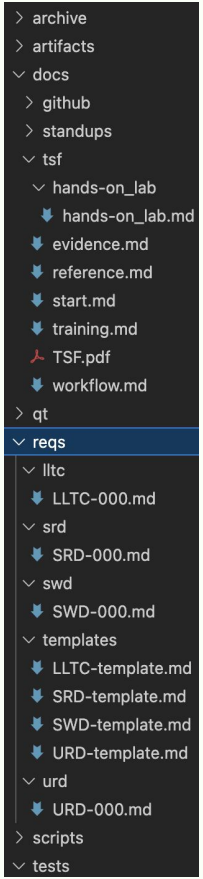
Lab Tasks

Task 1: The Author Creates the Requirements (15 min)

The **Author** performs these steps. The Reviewer observes.

1. **Create the Branch:**

```
git checkout -b feat/URD-002-battery-monitor
```



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Piracer Hardware & Software

Backlog 6 Estimate: 0

This item hasn't been started

GenAI Pair Programming

GenAI Goal

Team04_DrivaPi #2

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Trustable Software Framework (TSF) Implementation

Iterations 1 | TSF Goal

Team04_DrivaPi #25

Daily-Log

documentation

+ Add item

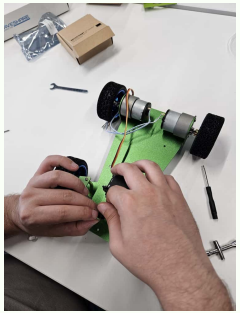
As a client, I need a fully assembled and operational PiRacer robot so that I can use it for autonomous vehicle development and demonstration purposes.

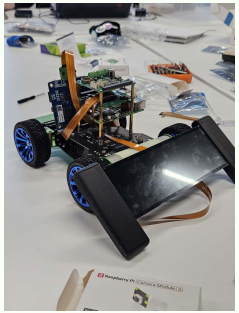
Acceptance Criteria

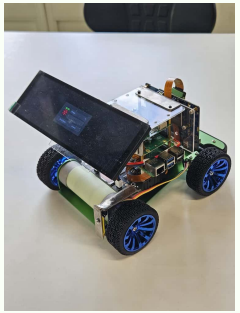
- [x] PiRacer robot fully assembled with all components (PiRacer Robot Assembled #6)
- [x] Raspberry Pi 5 successfully configured and operational (Raspberry Pi 5 Initial Setup #7)
- [x] All sensors and motors tested and responding correctly (PiRacer Robot Assembled #6)
- [x] Display interface functional and accessible (Develop Qt app #8)
- [x] Documentation of hardware setup completed

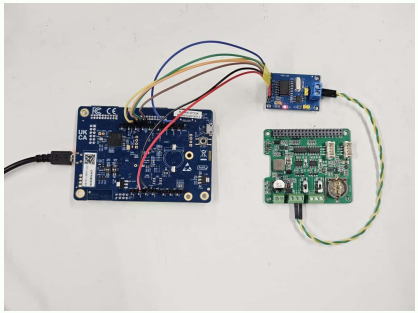
Definition of Done

- [x] All hardware components installed and tested
- [x] System boots successfully
- [x] Hardware configuration documented
- [x] Team members trained on hardware handling









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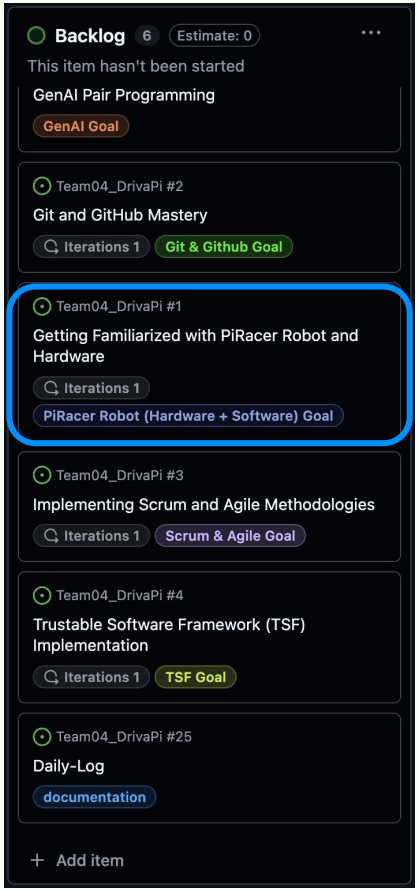
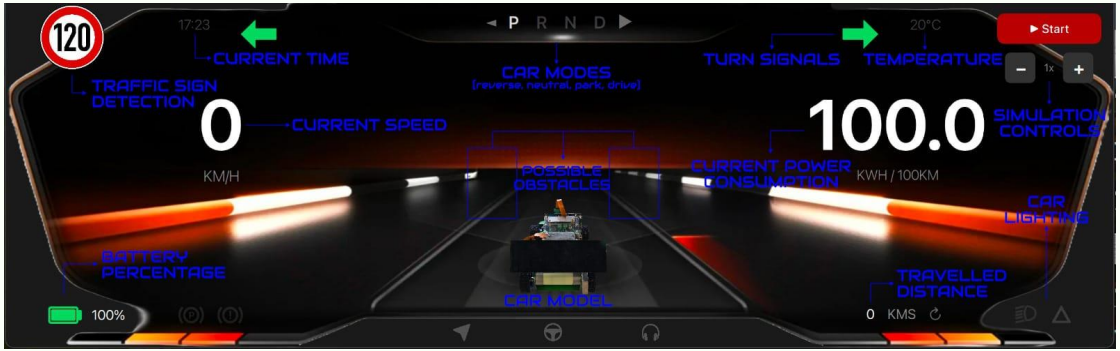
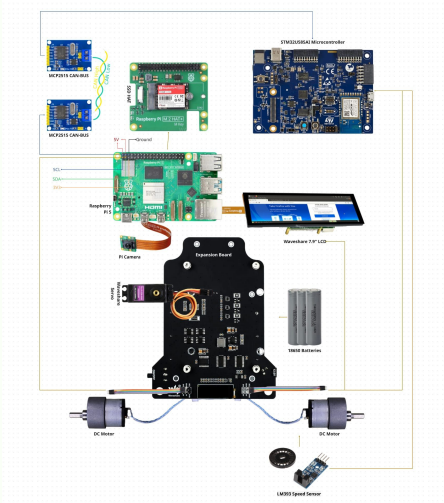
Piracer Hardware & Software







EXTRA:

Rasperry Pi OS -> Automotive Grade Linux

RUST for real-time embedded control system

Microcontroller study

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Piracer Hardware & Software

Backlog 6 Estimate: 0

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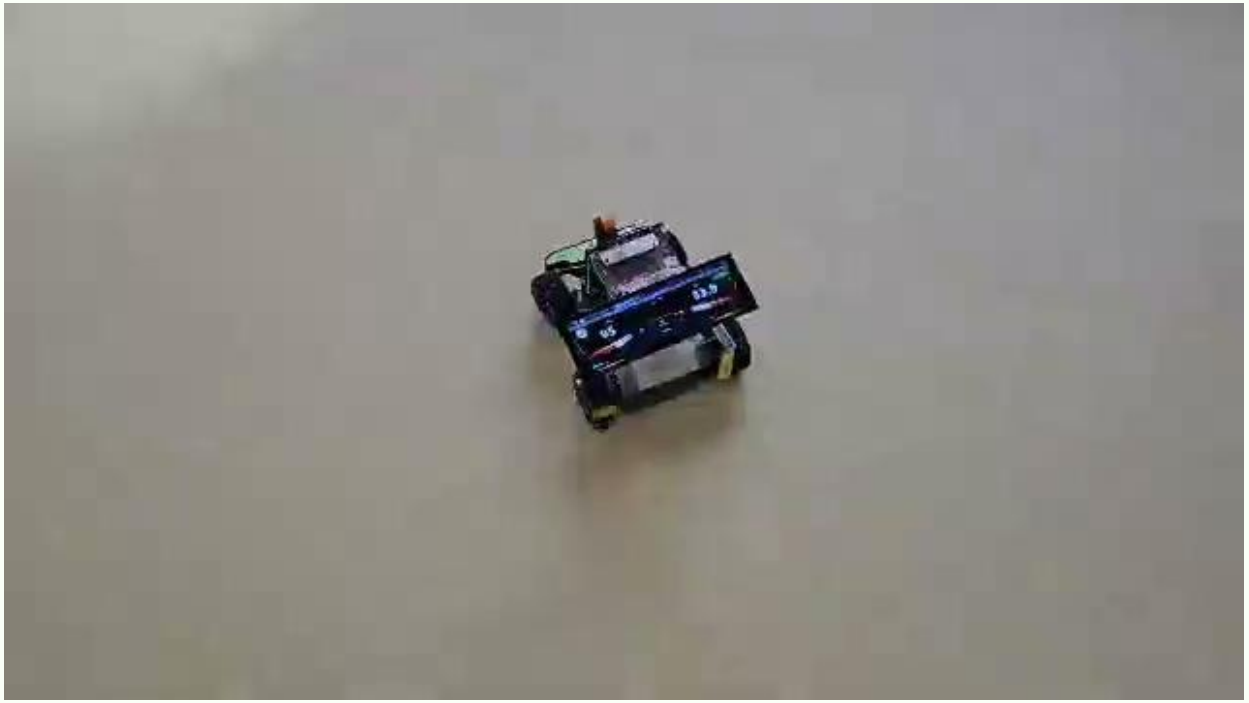
Daily-Log

documentation

+ Add item



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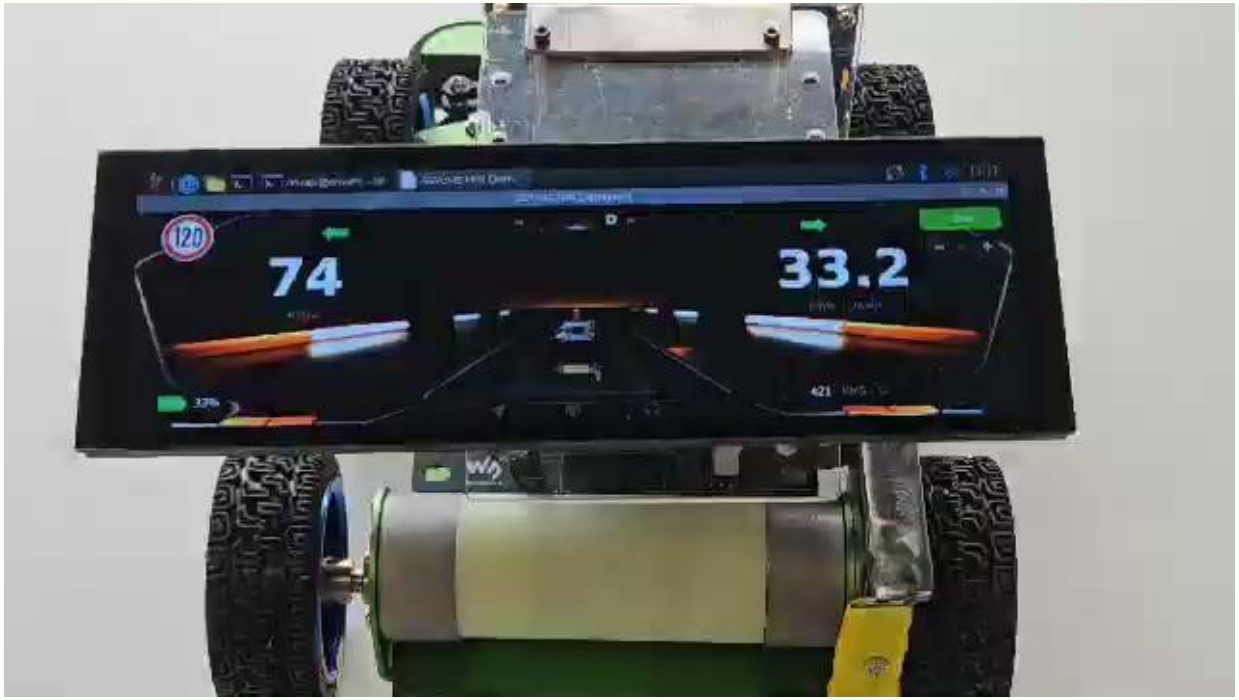
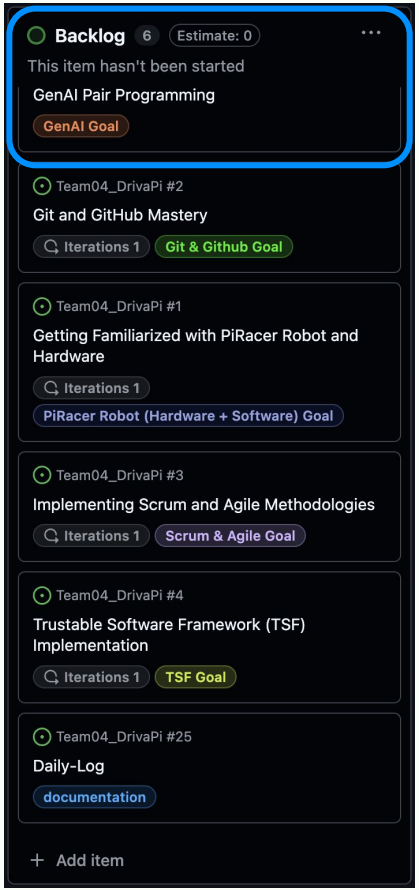


GenAI Pair



The system shall provide seamless integration with generative AI tools to assist developers during pair programming, boosting productivity and code quality through real-time AI collaboration.

Prerequisites (Goals 1–4 Completed)

- [x] Goal 1 (Getting Familiarized with PiRacer Robot and Hardware #1)
- [x] Goal 2 (Git and GitHub Mastery #2)
- [x] Goal 3 (Implementing Scrum and Agile Methodologies #3)
- [x] Goal 4 (Trustable Software Framework (TSF) Implementation #4)

Tasks

- [ ] GenAI Tool Integration and Documentation (GenAI Configuration #20)
- [ ] Review and Measure Effectiveness

Completion Criteria

- [ ] Increased productivity (Developers using AI tools should complete tasks at least 20% faster than without AI assistance)
- [ ] Code quality (AI-assisted code should pass 95%+ of unit tests)

Not implemented

Thank you!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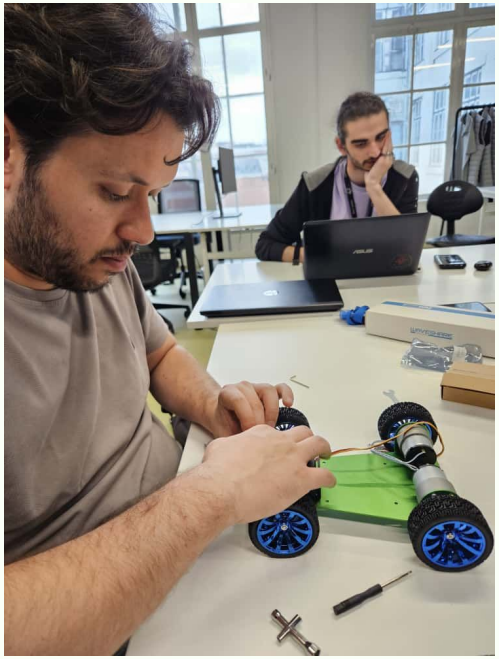

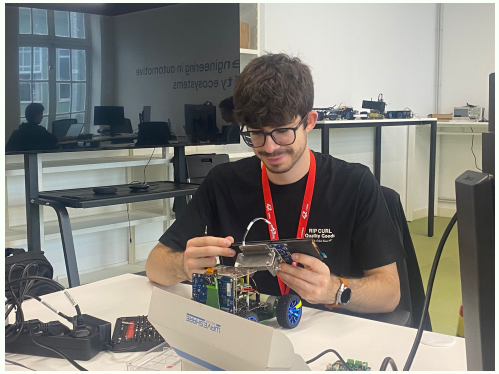


Trustable Software Framework (TSF)