

IE1.02 — Robotics Dashboard

AUMOVIO

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Problem Statement

AUMOVIO's reactive robot maintenance leads to frequent downtime, delays, and high costs due to the absence of a centralized monitoring system and limited visibility into key metrics like motor temperature and amperage.

Purpose

Develop a real-time robotics health dashboard for the 3XX production lines using Maple Systems CMT and PLCs to centralize robot data, enable predictive maintenance, reduce downtime to improve operational reliability.

Objectives

Data integration (15%) | Real-time monitoring (25%)| Fault detection & prediction (20%) Intuitive interface design (20%) Robust analytics & reporting (20%)

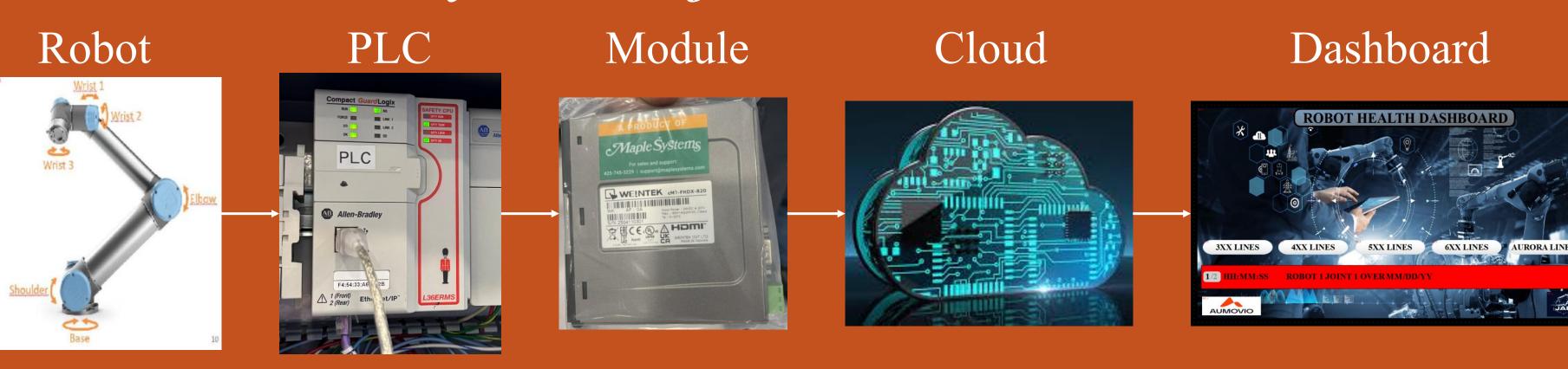
Team Members



Background Information

AUMOVIO is a manufacturing company for vehicle sensors that has implemented automation with robots.

System Information Flow



Constraints

| Time – May 2026 | People – Schedule limitations | Data & equipment restrictions

Dogian Annroach

	Design Approach	
Plan		Do
Introductions Tours		Training Drafts
Research Outline		PKI Collection
Identification	Plan	Construction
Methodologies		Integration
	Adjust	
	(or Act) Do	
Adjust & Act		Check
ROI Collection	Check	Execution
Analysis Reassess		Verification
Apply Feedback		Feedback Survey

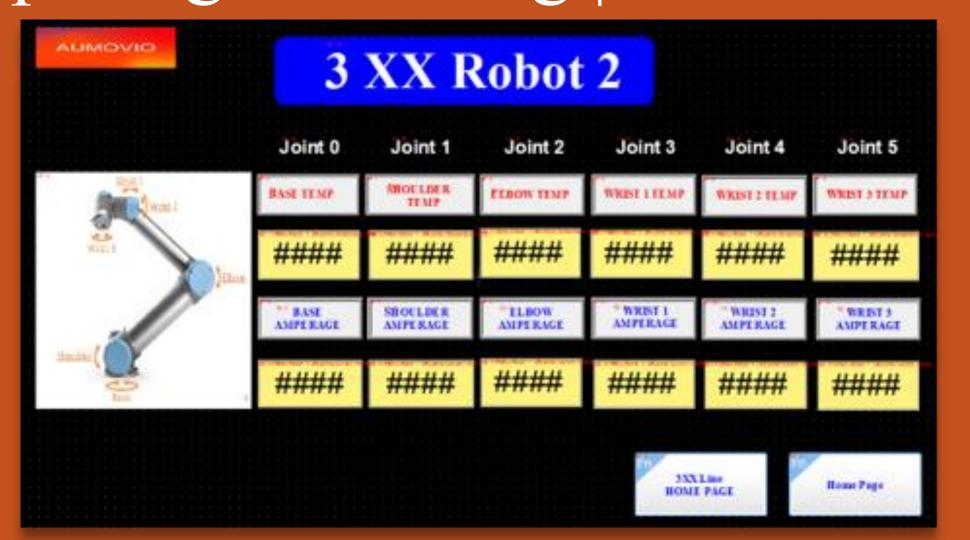
Schedule

TASK PRO				Jan	19, 20	26		Jan 26	, 2026		Feb 2	2, 2026		Fe	eb 9, 20	026		Feb 1	6, 2026		F	eb 23,	2026		Mai	r 2, 20	26		Mar 9	J
	PROGRESS	START	END	19 # 21																										
Phase 3: Execution				MITW	/	5 5	6 M T	14 1	[F S	S M	T W	T F	S S I	M T '	W T	F S	S M	T W	T F :	S S	M T	W T	F S	S M	T W	' T I	- 5 5	6 M 1	(W)	T
EasyBuilder Pro Training	100%	11/7/25	11/7/25																											
Digitize UI Drafts	0%	11/21/25	1/20/26																											
Collect Historical Downtime Information	0%	1/20/26	4/1/26																											
Analyze and Integrate Historical Downtime	0%	4/1/26	4/30/26																											
Analyze and Integrate Post-Integration Downtime	0%	2/17/26	5/5/25																											
Adjust UI as needed	0%	2/24/26	3/3/26																											
Adjust UI as needed (recycle)	0%	3/31/26	4/7/26																											
Adjust UI as needed (recycle)	0%	5/1/26	5/5/26																											
hase 4: Evaluation and Feedback																														
Integrate Dashboard with 3XX Line	0%	1/20/26	1/27/26																											
Track Improved Downtime Information	0%	1/27/26	4/27/26																											
Survey Target Audience on UI Design	0%	2/3/26	2/17/26																											
Evaluate Needed Changes of Dashboard	0%	2/17/26	2/24/26																											
Survey Target Audience on UI Design (recycle)	0%	3/10/26	3/24/26																											
Evaluate Needed Changes of Dashboard (recycle)	0%	3/24/26	3/31/26																											
Survey Target Audience on UI Design (recycle)	0%	4/14/26	4/28/26																											
Evaluate Needed Changes of Dashboard (recycle)	0%	4/28/26	5/1/26																											
Completion	0%	5/6/26	5/6/26																											

Human Factors

- Visual Sensory
 - Background consistency | Color coding | Font format | Overall layout
- Auditory System
 - Avoid alarm masking
- Vestibular System
 - Critical alerts stand out
- Tactile System

Spacing and sizing | Ease of use |



Performance Measures

- PLCs communicate with the robots to collect real-time data (KPIs)
- 2. The implementation produces a reduction in robot downtime (15%)
- Bar charts, trend lines, and ROI dashboards clearly indicate increase in savings to management.