

AI-Powered Product Development — Prompt Pack

Take an automotive feature through the full SDLC, live, with one small team

Industrial DevOps Now · industrialdevopsnow.com · run these seven prompts in order, in a fresh AI chat

Prime the chat once (before Prompt 1): "We're running a live workshop. Keep each answer concise and skimmable — bullets over prose."

1 PLANNING

You are a cross-functional automotive product team. Analyze the Driver Monitoring System concept and generate: Stakeholders · Business Objectives · Customer Needs · Risks · Assumptions · Success Metrics · Prioritized Outcomes.

2 REQUIREMENTS

You are a senior automotive systems engineer. Using the Planning outputs (stakeholders, customer needs, business objectives, success metrics, prioritized outcomes), produce a requirements specification for the DMS: functional requirements · non-functional requirements (latency, accuracy, privacy) · constraints & assumptions · acceptance criteria. Trace each requirement back to a stakeholder need or business objective from Planning.

3 ARCHITECTURE / DESIGN

Using the approved requirements, create a concise architecture description: system context diagram (in text) · major components (sensors, perception/AI, decision logic, HMI, vehicle interface) · interfaces & data flows · failure modes · safety considerations · privacy & cybersecurity considerations.

3 MODEL THE SYSTEM (SysML v2)

Using the architecture, generate a simple SysML v2 textual model: requirements · actions / functions (DetectDrowsiness, AssessConfidence, TriggerResponse) · interfaces / flows · major system elements. Focus on readability, not tool-specific correctness.

4 IMPLEMENTATION

Using the architecture and the SysML model, generate: high-level implementation approach · pseudocode for the detect-assess-respond loop · logic flow & data processing steps · assumptions. Explain how the solution satisfies the requirements.

5 VERIFICATION

Generate test cases from the acceptance criteria, then review the proposed implementation. Identify: which requirements are satisfied · which test cases pass · potential defects · risks (false alarms, missed detections) · recommended improvements. Provide a pass/fail assessment.

6 DEPLOYMENT

Using the verified implementation, create the deployment plan: OTA deployment plan & rollback strategy · monitoring metrics (accuracy, false-alarm rate, driver trust) — mapped back to the Success Metrics from Planning · release notes · customer impact assessment · success criteria after deployment.

The point: one small, AI-augmented team just took a feature from idea to a deployment plan — with every artifact traceable to the one before it. Humans set the thresholds, own the safety calls, and sign off. AI accelerated the work; people owned the decisions.