

MARCIO DE MELIN

AI SYSTEMS BUILDER | HUMAN-IN-THE-LOOP WORKFLOW AUTOMATION | HIGH-TRUST SYSTEMS

AI systems builder with 10 years of frontline public-infrastructure experience at Transport for London. I build proof-first tools across operational intelligence, AI workflow handoff design, and human-in-the-loop decision support. My current work connects practical frontline insight with AI-assisted systems engineering, using JavaScript, Node.js, Codex, Claude Code, GitHub, and developing Python for workflow analysis and automation.

SELECTED TECHNICAL PROJECTS

Rapid Report | Visibility & Intelligence Layer

- Created an offline-first PWA to reduce friction in frontline reporting of gate-line revenue leakage.
- Generated structured shift intelligence, including incident patterns and revenue-at-risk estimates.
- Under consideration for a TfL GEM Award; presented to senior institutional stakeholders as a response to major data-fidelity blind spots in frontline reporting.

Meridian | AI Workflow Handoff Layer

- Built a local/static AI workflow prototype for high-trust service businesses, showing how enquiries can become bounded replies, missing-detail prompts, review notes, follow-up queues, simple reports, and human-owned handoffs.
- Implemented tenant-aware routing, consultation-first policy refinement, fail-closed validation scaffolding, and static demo surfaces for client/reviewer evaluation.
- Created a public-safe proof package separating mocked demo behaviour, one prioritized live validation path, stakeholder-pending assumptions, and production-not-proven boundaries.

Aegis | Governance & Decision-Support Layer

- Built a human-in-the-loop prototype for high-stakes operational tradeoffs.
 - Designed to transform fragmented signals into auditable recommendations while keeping human sign-off central.
 - Focused on reasoning transparency and system legibility for institutional deployment.
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PROFESSIONAL EXPERIENCE

Transport for London — Customer Service Assistant 1 July 2015 – Present

- 10 years of frontline experience in a safety-critical environment, managing customer incidents and real-time decision-making under intense pressure.
- Identified operational pain points and built practical, system-level responses (Rapid Report) without formal engineering backing.
- Successfully translated frontline ground truth into technical prototypes to improve institutional visibility.
- Regularly communicate complex operational issues clearly to customers, colleagues, and management during high-pressure incidents.

NCS The Challenge Network — Senior Mentor / Team Leader July 2013 – August 2018

- Led diverse teams through structured programs, balancing logistics, stakeholder engagement, and crisis management.
- Developed early experience translating complex organisational structures into action for groups with varied needs.

CORE COMPETENCIES

- **Operational Intelligence:** Building tools to turn fragmented frontline reality into structured, actionable signals.
- **AI Systems & Orchestration:** Workflow design, fail-closed validation, and human-in-the-loop system thinking.
- **High-Stakes Decision Support:** Designing for legibility, consistency, and auditability under pressure.
- **Stakeholder Communication:** Translating complex technical issues for frontline, management, and non-technical audiences.
- **Documentation & Systems Thinking:** Architecture documentation, proof-point capture, and disciplined project framing.
- **Pressure Handling & Team Adaptation:** Crisis handling and de-escalation built from frontline operational experience.
- **Technical:** JavaScript, Node.js, HTML/CSS, PWA, local-first design, Git/GitHub, static web demos, local API prototyping, AI-assisted development with OpenAI Codex and Claude Code, prompt-to-code workflows, architecture documentation, ADRs; developing Python for workflow analysis and automation.

EDUCATION

BTEC Level 5 HND Creative Media Production London College UCK

A-Levels — English Literature, English Language, History