

ALI UYAR

AI Systems Engineer | TPM | Solution Architect

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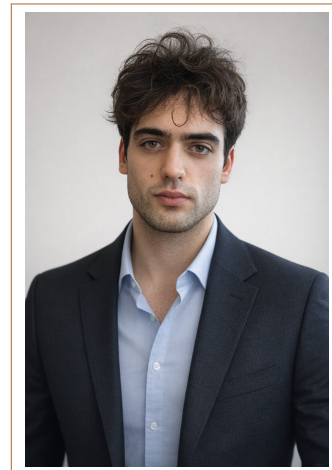
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🇦🇹 AT (EU)



Profile: AI Systems Engineer & TPM focused on **reliable LLM systems in production** (Agentic RAG / knowledge grounding, tool orchestration, structured outputs, evaluation & audit trails) and **enterprise delivery** (SSOT, data/integration architecture, ERP & data platforms).

Style: hands-on (Rust/Python/SQL) + architecture + end-to-end delivery (discovery → go-live).

Impact (selected): -90% QA/audit errors • -60% reporting/decision cycle time • +340% revenue in 90 days • 24+ consulting engagements

⚙️ LLM Systems

- Agentic RAG / Grounding
- Tool Orchestration & Workflows
- Eval, Monitoring, Auditability

🔗 Engineering

- Rust • Python • SQL
- Service APIs (REST) • Data Pipelines
- PostgreSQL • Redis • SQLite

📦 Delivery

- Program Ownership E2E
- Stakeholder/Vendor Mgmt
- Governance/SSOT & Go-Live

CORE COMPETENCIES

- **Production LLM Systems (RAG/Agents):** multi-stage retrieval & tool use, structured outputs, fail-closed/fallback design, logging & reviewable run records (audit trail).
- **Reliability & Evaluation:** reproducible evals, regression/drift gates, quality & safety checks, deterministic artifacts (evidence packs) for acceptance/compliance.
- **Data/Integration Architecture:** SSOT/information standards, data models, migrations, interface design (REST), data quality, KPI/reporting, and decision support.
- **End-to-End Delivery:** discovery/requirements, architecture decisions, release/risk management, acceptance, hypercare; steering up to C-level incl. vendor management.

EXPERIENCE

Immovate Realita GmbH

Vienna

Asset Manager | AI & Data Strategy Lead

(fixed-term) • 06/2025 - 12/2025

- **Built & rolled out agentic RAG decision support:** multi-stage retrieval (grounding), tool orchestration & self-checks for defensible risk analyses/recommendations - -60% cycle time (reporting/decisions).
- **Deployed LLM document automation to production:** classification/naming/routing with confidence logging, audit trail, fallbacks - -90% QA/audit error rate and ~40% less search effort (25+ users).
- **Led AI & digital transformation initiative** (portfolio € 350 M): roadmap/value prioritization, SSOT standards, steering with executive management (risk, acceptance, cadence).
- **Owned vendor delivery** (budget/scope/timeline/quality): specifications, acceptance criteria, release planning; reduced shadow IT through consolidated data and process flows.

Datenpol GmbH

Vienna

Technical Program Manager & Solution Architect

08/2023 - 10/2024

- **Delivered ERP programs (Odoo) end-to-end** (team 5) for SMB to enterprise (500+ employees): discovery/requirements → go-live & hypercare.
- **Target & integration architecture:** data models, migration, integrations, REST APIs; clear interface contracts + acceptance/testing.
- **Scaled parallel delivery streams:** scope, risk/release, standardized acceptance, handover to operations/support.
- **Results:** 6+ go-lives with ~40% process improvement; ROI break-even typically <6 months.

Liliputbahn im Prater GmbH

Vienna

Business Development Manager | Operations Lead

(fixed-term) • 03/2023 - 06/2023

- **Multi-site operations:** 3 sites (deputy lead for an additional 3), rebuilt KPI/reporting; 15+ staff cross-site.
- **B2B expansion end-to-end:** built partner channel (offers, pricing/yield, outreach) and closed 11 corporate partnerships.
- **Revenue turnaround:** +340% in 90 days (1 site) via pricing/yield; implemented internal software for special rides/backoffice.
- **ERP readiness:** process capture, target processes, master data and data requirements.

Digital Automation Engineering

Vienna

Principal TPM & Solution Architect (AI/Data)

Consulting engagements • 2021 – present

- **24+ consulting engagements (15+ clients)** as single point of accountability from discovery to go-live: requirements, architecture, delivery/release, acceptance, hypercare.
- **Multi-system integrations** (typically 3–5 systems/engagement): ERP, data platforms & APIs; owned interface design, data quality, and acceptance/testing processes.
- **LLM automation (RAG/Agents) & auditability by design:** document/data workflows with knowledge grounding + tool orchestration (alerts, dashboards) – 50–80% less manual effort; deterministic evidence packs & replayable RCA/regression gates.

ADDITIONAL EXPERIENCE (SELECTED)

- ((schwingung)) multimedia solutions GmbH – IoT Infrastructure Engineer (fixed-term, 2022)
- Flügel & Klement GmbH – Technical Project Manager (fixed-term, 2022)

TECHNICAL PROJECT HIGHLIGHTS (OPEN SOURCE)

PECR – Policy-Enforced Context Runtime: governance runtime for AI context with policy/time rules, typed operator allowlists, immutable evidence units, and claim-to-evidence verification; fail-closed by design. **Tech:** Rust, Python, OPA, PostgreSQL

Open Context Graph – Privacy-first AI Process Intelligence: governance-assisted process inference and next-step scoring for operational workflows with traceable decisions. **Tech:** Python, TypeScript

SchemaPilot – Governance-first AI Readiness Platform: secure data access layer with policy enforcement, audit/provenance, deterministic pipelines, and CLI-first onboarding for unstructured enterprise data. **Tech:** Python, FastAPI, DuckDB/Trino, OIDC, Docker/Kubernetes

IncidentTape – replayable incident artifacts for RCA and regression gating (deterministic, offline-first, fail-closed) incl. redaction and secret/PII leakage scans. **Tech:** Rust

VeilPack – offline-first privacy gate for data pipelines: policy-based detection/redaction of sensitive content and audit-grade evidence bundles. **Tech:** Rust, SQLite, CLI

DecisionGraph – compliance-oriented agent governance with event sourcing, immutable run records, and deterministic replay for audits and acceptance. **Tech:** Python, SQLite/PostgreSQL

RESEARCH & PUBLICATIONS (LLM RELIABILITY & REPRODUCIBILITY)

DOI-archived **technical papers** (Zenodo) + reproducible artifact packs: deterministic runs (manifest-verified), controlled evaluation (null/control tests, compute-matched ablations), and auditable claims.

CertiPatch: Specification Repair for Frozen Language Models with Replayable Empirical Certificates. DOI • Repo

Train–certify–verify pipeline • counterexample-guided constrained repair • reproducibility gates • **Production:** fail-closed evidence for acceptance/audit.

AvalancheLLM: Token–Layer Activation Event Cascades in LLMs under Gain Scaling. DOI • Repo

Rate-matched metrics (branching, $\Delta b, \chi$) • strong null controls • deterministic artifact pack • **Production:** diagnostics for instabilities under gain/scaling.

RIA: Retokenization Invariance Atlas. DOI • Repo

Deterministic audit for semantics-preserving formatting effects in LLM QA • no-truncation/semantics gates • precommitted analysis • reproducible artifact pack • **Production:** auditable reliability evidence for evaluation sign-off.

ScrubID: Identifiability-Aware Auditing for Mechanistic Interpretability. DOI • Repo

Claim auditing with non-identifiability certificates (RR/SSS/CC) • **Production:** verifiable interpretability evidence instead of overclaiming.

CacheMedic++: Robust KV-Cache Stabilization via Self-Distillation. DOI • Repo

Deterministic KV-cache corruption protocols • distillation-driven repair operators • seed/holdout replication + bootstrap CIs • manifest-verified artifact pack • **Production:** reproducible debug/repair pipeline for serving stability.

Discover-Then-Distill: Separating Test-Time Adaptation from Self-Distillation Consolidation. DOI • Repo

Compute-matched discover→distill pipeline • ablation suite • retention/transfer diagnostics • **Production:** clear separation of test-time adaptation vs consolidation.

Engineering Takeaways: Fail-Closed Guardrails • Deterministic Evidence Packs • Control-First Evaluation

EDUCATION & CERTIFICATIONS

FH Technikum Wien – Industrial Engineering (completed 2nd semester, GPA 2.0)

2021

HTL Vienna 10 – High School Diploma (Mechatronics): Automation, Computer Science, Embedded Systems

2018

Odoo 17 Functional Certification (07/2024) • **Six Sigma Yellow Belt** • **Google Certs (07/2023):** Project Management, Business Intelligence, Data, Cybersecurity

LANGUAGES

German (native) • English (C1) • Turkish (B1)