

Belton Albert

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Product and platform architect with 20+ years turning ambiguous, high-stakes problems into agentic AI products that are safe, measurable, and trusted at enterprise scale. I own the full arc — product thesis and architecture, multi-agent systems over structured and unstructured data, evaluation and safety, delivery, and global, multi-region operations.

CORE COMPETENCIES

Product Architecture	Product thesis, system design, roadmaps, interaction models	Agentic AI	Multi-agent orchestration, grounded retrieval, reasoning
Data Intelligence	Structured & unstructured data to decision-ready insight	AI Quality & Safety	Evaluation, benchmarks, deterministic guards, telemetry
Cloud Platforms	Azure infrastructure & operations at global scale	Delivery & Ops	Build/release, service ownership, incident response, reliability
Security & Compliance	Data isolation, governance, regional requirements	Leadership	Architecture reviews, standards, scaling engineering judgment

EXPERIENCE

Microsoft — Senior Engineering Director, Agentic Data & AI Platforms

CURRENT

- Lead the **product and technical architecture** for agentic solutions that reason over enterprise data, orchestrate specialized agents, and convert complex information into decision-ready insights.
- Define product boundaries, platform capabilities, and executable roadmaps — translating customer problems into architecture, interaction models, and measurable outcomes.
- Own **Azure infrastructure and operational strategy at global, multi-region scale** — delivering availability, performance, and cost efficiency while meeting compliance and regional requirements.
- Institutionalize **evaluation, safety, and reliability** as product capabilities — benchmarks, failure analysis, deterministic guards, and production telemetry.
- Drive engineering operating systems: **clear service-ownership models**, architecture reviews, build and release, incident learning, and quality gates that scale judgment across teams.

SELECTED WORK

DataPilot Studio FLAGSHIP PRODUCT — DESIGNED & BUILT

- End-to-end agentic analytics product: natural-language question → **intent** → **grounding** → **multi-agent reasoning** → **validated SQL** → **evidence-backed decision**.
- Product thesis that makes **trust part of the interface** — validated queries, sources, assumptions, and progress are visible, not a black box.
- Architecture of agents with explicit contracts (intent, retrieval, generation, validation, execution, visualization), each independently measurable.
- Governed by construction: data isolation, authentication context, semantic guidance, compliance, and operational controls built in.

Systems Research

- Hybrid semantic-lexical **schema linking**
- Multi-stage **intent analysis** & decomposition
- Hypothetical schema descriptions (HyDE)
- Hierarchical **schema embeddings**
- Confidence-driven **iterative research**
- Chain-of-thought / scratchpad control
- Multi-tier **cascading retrieval**
- Static analysis & rule-based **SQL safety**

IMPACT HIGHLIGHTS

- Shipped a complete agentic AI product from first principle to production, spanning retrieval, reasoning, safety, evaluation, and UX.
- Authored **8 systems research papers** translating production challenges into testable, reusable methods.
- Scaled platform reliability and compliance for **global, multi-region** Azure operations.