



PER BERGMAN

Generative Architect — AI • Cloud • Blockchain • Distributed Systems
Senior Manager, Ernst & Young

Santa Fe, NM, USA • Phone +1 505 796 2219 • nondualist@gmail.com •
linkedin.com/in/perbergman • github.com/perbergman

SUMMARY

Generative Architect with 30+ years designing and delivering complex distributed systems across AI, blockchain, and cloud. Known for extremely fast generative prototyping (**80+ apps in 2025**), deep architectural clarity, and the ability to synthesize multiple domains into elegant, working systems. Creator with **100+ GitHub repositories** built through a long-term generative engineering practice — spanning AI workflows, distributed systems, blockchain tooling, and rapid 0→1 prototypes. Operates best in high-ambiguity, high-complexity environments. Expert in AI-assisted development using Claude Code, Cursor, Windsurf, Copilot, and Augment. Designs architectures that integrate ledger systems, cloud-native services, smart contracts, event-driven patterns, and large-scale data flows. A rare combination of deep systems knowledge, creative intelligence, and rapid 0→1 execution.

VALUE PROPOSITION

I specialize in turning **high-ambiguity, high-stakes technical programs** into **coherent, scalable architectures** that large organizations can actually run. My strength is seeing structure where others see noise — rapidly stabilizing complexity, defining clear patterns, and producing systems that hold together in production at real-world scale.

ARCHITECTURAL THROUGHLINE

Across three decades, my work has followed a single thread:
turning complex, ambiguous domains into coherent systems.
From early telecom and object databases in Sweden → enterprise integration and cloud architectures → decentralized ledgers, identity, and ZKP → to today's agentic AI and rapid generative prototyping.
Across these eras, one pattern remains constant:
seeing structure in noise, moving from insight to architecture quickly, and building systems that hold together under real-world scale.
This is the core of my practice —
a blend of engineering depth, pattern recognition, and generative speed that lets new systems emerge fully formed.

CORE CAPABILITIES

- Generative AI-assisted prototyping
- 0→1 system creation
- Distributed architecture
- Blockchain & smart contract design
- Cloud-native patterns (Azure, AWS)
- Workflow & data pipelines
- High-scale systems
- Technical strategy & executive advisory
- Emerging tech R&D
- FinTech, carbon markets, traceability
- Identity & cryptographic workflows
- AI developer workflows (LLM-first development)

EXPERIENCE

Ernst & Young — Senior Manager, FinTech/Blockchain Tech Lead & Solutions Architect 2022–Present

Flagship Project — Public Funds Management: Global Funds Disbursement Tracking (2023–Present)

Solution Architect for global public funds disbursement tracking platform.

- Designed a **global multi-party transparency and traceability system** used across national institutions and governmental organizations.
- Architected the core blockchain ledger on **Hyperledger Besu**, with custom Solidity contracts and secure state evolution.
- Built full Azure cloud architecture: Azure Functions, Service Bus, Storage, Postgres, DevOps, identity and privileged access governance.
- Integrated **AI and Agentic layers** using Azure AI Foundry, OpenAI, and LLM workflows.
- Designed identity, access controls, regulatory reporting structures, and event lifecycle models.
- Provided executive architecture guidance for program governance, technical roadmap, and future-state design.

Other EY Blockchain & AI Highlights

- Canton Network Deployment:**
Deployed and configured **Canton validator nodes** (DevNet → TestNet → MainNet) for real transaction flows, including governance setup, networking, operational readiness, and secure environment configuration.
 - Architected carbon offset systems, FinTech transaction flows, and enterprise identity solutions.
 - Built rapid AI-powered prototypes using Claude Code, Cursor, Windsurf, Augment, and Copilot.
- Technologies:** Azure, Azure AI, Hyperledger Besu, Solidity, DAML, Canton, Ethereum tooling, Postgres, ACA, Azure Functions, Service Bus, DevOps.

Maxana — Vice President of Innovation 2022

- Designed multi-domain FinTech, payments, and workflow systems.
- Built marketplaces, payment integrations, and enterprise alerting prototypes.
- Led demos, pre-sales, and architecture R&D.

Technologies: AWS, Python, Java, Go, Kubernetes, Datadog, Prometheus, Camunda Workflow, Stripe APIs.

Ernst & Young (via Zilker acquisition) — Senior Architect 2020–2022

- Architected real-time mobile delivery system with distributed event processing.
- Led blockchain royalty tracking, DAML carbon-credit PoC for repo loans, and vendor assessments.
- Delivered mobile, cloud, and distributed workflows across industries.

Technologies: Microsoft Quorum, Hyperledger Besu, DAML, Ethereum, Bitcoin, AWS, Android/Kotlin.

Zilker (acquired by EY) — Senior Architect, Blockchain & Integration 2020

- Designed DAML-based smart contract workflows.
- Hyperledger Fabric blockchain project for the healthcare industry.

Technologies: DAML, AWS, Hyperledger Fabric, Kafka, HashiCorp Vault, Terraform, Ansible.

XPANSIV — VP Technology, Innovation Group / Senior Software Architect 2018–2020

Architectural lead for environmental commodity and carbon market platforms.

- Designed next-generation integrity, provenance, and lifecycle models for global carbon markets.
- Prototyped distributed ledger workflows and high-integrity commodity-data systems.
- Designed decentralized identity prototypes using **Hyperledger Aries**, verifiable credentials, and **DIDs**.

Technologies: AWS, Node.js, Go, Java, Scala, React, Kafka, Postgres, ledger models, Aries/DID.

Oculus360 — Senior Software Architect 2015–2018

- Architected a high-volume behavioral analytics and ML-integrated search platform.
- Designed real-time ingestion pipelines for high-velocity behavioral signals.
- Built low-latency query infrastructure and ML inference integration.

Technologies: Java, Python, AWS, Spark, Kafka, Elasticsearch, Redis.

IBM — Consultant (Architecture) 2013–2015

- Enterprise architecture for global cloud and integration programs.
- Designed early cloud-native reference architectures.
- Modernized enterprise BPM/SOA platforms.

Technologies: WebSphere BPM, MQ, Java, DB2, Linux, AWS.

EMC — Consultant 2012–2013

- Systems integration and enterprise consulting across storage and cloud ecosystems.

Technologies: EMC storage, VMware, Linux, Java, Spring Boot.

Amazon — Software Development Engineer 2007–2008

- Built and maintained distributed systems for global-scale availability.
- Implemented monitoring, automation, and resilience patterns.

Technologies: Java, Linux, AWS internal toolchain, distributed coordination systems.

Ascendant — Consultant 2008–2012, 2006–2007

- Designed and delivered enterprise systems across the **US, Turkey, and the Netherlands**.
- Led architecture, integration, and cloud-transition initiatives across distributed teams.

Technologies: Java, Spring, SQL, early AWS, integration stacks.

Versant — Consultant 2000–2006

- Developed distributed object database workflows and storage engines.
- Built transaction coordination, indexing, and object persistence components.

Technologies: C++, Java, ODBMS internals, distributed commit models.

Early Career — Sweden (Telecom & Distributed Systems) 1991–2000

Software Engineer and Architect roles across Swedish telecom and early internet companies. Work included distributed systems, early object-oriented architectures, and large-scale enterprise platforms across telecom networks and early internet infrastructure. Fluent in Swedish; dual US/EU (Sweden) citizenship.

SIGNATURE PROJECTS

Zero-Knowledge Proof System (EY)

Designed a full-stack ZKP-based private transaction workflow.

- Implemented Circom/Groth16 circuits (BN254).
- Built proof generation, on-chain verification, and encrypted event flows.
- Designed UTXO-style private state using Pedersen commitments.

AI-Accelerated Development Pipeline (EY)

LLM-first SDLC using Claude Code, Cursor, Windsurf, Augment, and Copilot for GitHub.

Decentralized Identity & Verifiable Credential Prototype (XPANSIV)

Designed a verifiable credential workflow for oil & gas ownership lineage.

- Implemented multiple **Hyperledger Aries agents** representing real stakeholders.
- Used **VCs** and **DIDs** to prove relationships (e.g., well ownership → production → operator).
- Integrated identity proofs with commodity-data provenance models.

Global Carbon Market Traceability Architecture (XPANSIV)

Ledger-backed commodity lifecycle tracking and regulatory-grade provenance → exchange.

High-Volume Behavioral Analytics Pipeline (Oculus360)

Real-time streaming and ML inference architecture.

TECHNOLOGY STACK

AI Tools: Claude Code, Cursor, Windsurf, Augment, Copilot, Azure AI Foundry, Huggingface, ollama, LM Studio, Jupyter, SageMaker
Cloud: Azure Functions, Azure Container Apps, Service Bus, Postgres, Key Vault, AWS (EC2, ECS, Lambda, RDS, SQS, CloudFormation), Kubernetes (AKS, EKS, GKE)
Blockchain: Hyperledger Besu, Solidity, DAML, Canton, Fabric, Aries (DIDs/VCs), ZKP (circuits + verification), Ethereum tooling, EVM internals
Languages: Go, TypeScript, Python, Rust, Java, Scala, Erlang, JavaScript
Data & Architecture: CQRS, event systems, Postgres/JSONB, Redis, Elasticsearch, graph models (Tinkerpop/Neptune), MongoDB, Hadoop
DevOps: GitHub Actions, Azure Pipelines, Terraform, Ansible, Jenkins, monorepos, CI/CD, observability

SELECTED TALKS & WRITINGS

- RAGTime: Neo4j + NVIDIA GPUs on the Cloud** — Medium
https://medium.com/@bergman/ragtime-building-a-rag-with-neo4j-and-nvidia-gpus-on-the-cloud-31e11aa03000
- Zero-Knowledge Proofs in Practice** — internal presentation and architecture walkthrough

CERTIFICATIONS

- DAML Fundamentals, Programming, Architecture** — Digital Asset
- AWS Certified Solutions Architect – Associate**
- Architecting with Google Kubernetes Engine (GKE)** — Google Cloud

LECTURES & PRESENTATIONS

- Agentic AI Architectures** — internal workshops and client advisory
- Digital Twins in Telecom** — technical lecture and industry overview
- Domain-driven Design (DDD)** — internal workshop

EDUCATION

M.Sc. Computer Science — Sweden