

# Louis Grenzebach

Principal Software Engineer · Solution Architect · Prompt Engineer

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**Pronouns** They/Them

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## Summary

Three decades in software, the last nine architecting and shipping identity-protection systems at scale. Strongest where high-level systems architecture meets low-level implementation — built a company's first SSO/JWT auth platform, founded its cross-team architecture function, and led a multi-year greenfield platform rebuild that now serves ~1.7M customers. Currently driving field-level encryption, audit log standards, and AI-augmented engineering practices at Allstate Identity Protection.

## Experience

Principal Software Engineer · **Allstate Identity Protection**

Jul 2022 - present · Remote (Eugene, OR)

Led the post-acquisition greenfield platform rebuild across the finish line; **platform shipped Jan 2023, serving ~1.7M customers**. Continues as a lead principal in the Solution Architecture and Design (SAD) function, driving cross-team architecture and standards.

- **Field Level Encryption** (*in flight*): drives both standards authorship and platform-wide implementation, hardening protection for sensitive customer data independently of database-level encryption.
- **Audit Log standards & implementation** (*in flight*): owns the org-wide standard and its rollout across services for compliance and observability.
- **“Trifecta interface”**: original architecture pattern unifying **CQRS + REST** under a single design (shipped, in production), with **Model Context Protocol (MCP)** as the planned third leg now in active design — positioning AI-agent integration as a first-class interface modality alongside existing consumers.
- **AI-assisted code generation** (*specification-driven, test-gated*): authored a methodology in which standards inform tests, tests are human-reviewed, and an LLM produces code bound to those tests — treating the LLM as a constrained implementer, not a free agent.
- Established the company's **internal data archiving system, API standards, and security standards** as part of the post-launch SAD agenda.

Senior Developer · InfoArmor / **Allstate Identity Protection**

Jun 2017 - Jul 2022 · Phoenix, AZ

Joined InfoArmor pre-acquisition; remained through the August 2018 Allstate buyout and rebrand to Allstate Identity Protection.

- **Built the company's first SSO / JWT identity & authentication platform** from scratch — peak ~40,000 active users — establishing the auth substrate that carried the product through multiple platform generations.
- **Drove engineering-practice modernization** in the first two years — including the move from git-based deployment to a Jenkins CI/CD pipeline — bringing standard practices into a small-company org, slowly and by partnership rather than mandate.

- **Led the post-acquisition greenfield platform rebuild** (2018+), including: new CI on **Buildkite** in place of Jenkins, **Helm-chart deployment to Kubernetes**, **migration of the in-house auth platform onto Auth0** (freeing engineering capacity from owning a security-critical undifferentiated service), and ongoing modernization of internal API systems.
- **Founded the Solution Architecture and Design (SAD) function**: started as an internal initiative ~late 2019; recognized as an official function within months. SAD is the company's formal bridge between product and engineering — reviewing proposed initiatives, producing specification research, and translating research into the acceptance criteria of downstream tickets so that engineering work is *informed, not ad hoc*.

## Member · Up9 Consulting

**Jan 2008 - Dec 2021** · Phoenix, AZ · concurrent side practice

- Served primarily K-12 and higher-ed clients across OS X / Linux server deployment, directory and SSO integration, SIS integration and reporting, LAMP application development, MySQL data warehousing, and network-based lab imaging.
- **Remote Linux host deployments for a new PayPal datacenter** as part of a three-person team over six months.

## Senior Customer Delivery Technical Engineer · CyberSponse

**Jun 2013 - Dec 2016** · Phoenix, AZ

- Hired as a senior application developer on a Symfony2 platform; scope expanded across operations, system architecture, and lead developer duties as the startup evolved.
- **Designed the security mechanism for inter-service communications and the licensing system**, owning the cryptographic boundaries between platform components.
- **Led the application architecture rework into microservices** for geographically distributed scaling.
- Took on and delivered a major government client at end-of-year before the company closed its Phoenix office.

## Earlier roles

**Unix/Linux Administrator** at Bechtel (2007 - 2008) — monitoring and audit tooling on HP-UX. **Senior Systems Analyst** at Arizona State University (2006 - 2007) — development and project lead on a data warehouse contracted to Paradise Valley USD; aggregated data nightly from ~40 source databases (DBF, SyBase, MySQL) into a Drupal-fronted query environment. **Network Applications Specialist III** at Paradise Valley USD (2001 - 2006) — gradebook, portal, server deployment, and SSO development; established the data warehousing initiative later continued under ASU.

## Selected Projects

Active personal work; full notes at [pknull.ai/projects](https://pknull.ai/projects).

- **Asha** — multi-harness AI workflow system: persistent identity, session memory, and pluginized workflows for Claude Code and Codex.
- **Thallus** — local-first AI agent infrastructure umbrella covering Egregore, Familiar, Servitor, Scry, and thallus-core.
- **pknull.ai** — hand-built static site (Python + Jinja2) with custom build pipeline for responsive images, JSON-LD, Atom feed, and self-hosted typography.

## Skills

- **Languages** — Python (3.10+), Go, Rust, TypeScript, JavaScript (Node.js), PHP, Bash, SQL
- **AI / LLM engineering** — Anthropic Claude API, prompt engineering, LLM-bound TDD methodology, multi-agent / multi-harness coordination, Model Context Protocol (MCP) design

- **Architecture** — CQRS, REST, event-driven systems, microservices, identity & SSO design, schema- and standards-driven design
- **Platform & infra** — Kubernetes, Helm, Docker, Buildkite, Jenkins, AWS, Auth0, PostgreSQL, MySQL
- **Security** — field-level encryption, SSO / JWT, identity & access management, audit log standards, security architecture
- **Practices** — test-driven development, cross-team standards authorship, technical writing, code review