

# Karthik Ravichandran

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Builds and leads large-scale systems and platforms across ML, financial systems, and developer tooling. Experienced in distributed systems, data infrastructure, and production platforms at scale. Former Principal Engineer at Affirm and co-founder of Woven.dev

## Career Highlights

- **Led architecture for Affirm's centralized data platform** powering ML decision systems, financial pipelines, analytics, and experimentation across the company.
- **Directed platform strategy for a 50+ engineer data infrastructure organization** spanning storage, warehousing, and data engineering systems.
- **Co-founded Woven and built a developer-native platform** that automated data engineering workflows for enterprise and fast-growing startups.

## Experience

### Woven.dev — Co-Founder & CTO | 2024–2026

Built an AI-powered developer platform automating data engineering workflows by detecting schema changes to production data and applications, generating remediation, enforcing governance policies, and delivering personalized insights to data stakeholders.

- Built a **Git-native metadata and governance system** enabling developers to define datasets, ownership, schema contracts, and policies alongside code.
- Implemented **automated remediation for schema changes** (e.g dbt model updates) in pull requests using impact analysis to prevent downstream production failures
- Built a **query and dependency analysis engine** to infer system relationships, usage patterns, and downstream impact across 5,000+ datasets.
- Designed **evaluation frameworks** combining ground-truth validation, human feedback signals, and end-to-end outcome metrics to assess and improve AI-driven workflows.
- Created **metadata-driven developer workflows** integrating Git, data warehouse telemetry, and Slack notifications; deployed with enterprise fintech and fast-growing startup customers.

### Affirm — Principal Software Engineer | 2017–2024

Led architecture for Affirm's centralized data platform powering ML decision systems, financial systems of record, and company-wide experimentation and analytics.

- Led technical direction for Affirm's **data platform organization spanning 50+ engineers**, defining architecture across storage systems, warehouse infrastructure, data engineering platforms, and analytics tooling.

- Built and evolved core platform infrastructure **including event ingestion pipelines, streaming and batch systems, data contracts, and centralized access layers** connecting operational services with analytics environments.
- Led development of the **storage and warehouse data stack** enabling reliable, scalable data access across operational and analytics systems, along with the replication and control-plane infrastructure connecting them.
- Built platform infrastructure enabling **production ML-driven underwriting and fraud systems** and built the **Affirm Experiments Platform (AXP)** supporting large-scale A/B testing and rapid product iteration.
- Built infrastructure supporting **financial systems of record (ledger, reconciliation, settlements)**, ensuring correctness, auditability, and reliability for critical financial operations.
- Led **privacy and governance initiatives from inception (e.g., GDPR, CPRA)**, translating regulatory requirements into automated enforcement (CI controls, data policies) and driving cross-functional alignment across engineering, legal, and product.
- Drove **platform-wide cost optimization initiatives**, reducing annual data infrastructure spend by multi-million dollars through storage, compute, and pipeline efficiency improvements.

#### **MindSumo** — Head of Product & Engineering | 2014–2017

Led engineering and product development for a crowdsourcing platform connecting enterprises with a global contributor community.

- Built and scaled the platform serving **2M+ contributors and 100+ enterprise customers** including Fortune 500 companies.
- Led engineering, product, and design teams while architecting core systems and **scaling the contributor community 10× in 18 months**.

#### **Areas of Expertise**

- **Systems & Platform Architecture:** distributed systems, backend services, event-driven architectures, control planes, developer platform
- **Data & ML Infrastructure:** data platforms, streaming and batch pipelines, lakehouse and warehouse systems, ML data pipelines, experimentation infrastructure
- **Storage & Compute:** OLTP systems, Snowflake, Iceberg, Spark, Airflow, dbt
- **Data Systems & Processing:** event ingestion, stream processing, schema evolution, ETL orchestration, lineage and dependency analysis
- **Governance & Privacy:** metadata systems, policy enforcement, privacy controls, auditability

#### **Education**

**Stanford University** — M.S., Electrical Engineering

**College of Engineering, Guindy** — B.E., Electronics & Communication Engineering