

Nicolas Venne

Senior Software Developer

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English & French (bilingual)

SUMMARY

Senior software engineer with 7+ years building multi-tenant SaaS. One of a three-person core engineering team at Klipfolio, owning services, public APIs, AI/agent systems, and the Kubernetes infrastructure they run on, from design through production. Recent focus is production AI: MCP servers, AI chat over customer data, and a knowledge layer that gives AI tools governed, source-backed company context, along with the APIs and data-ingestion services underneath.

EXPERIENCE

Senior Software Developer — Klipfolio

06/2022 – Present · Remote

- Led the **Zuora → Stripe billing migration** for 4,000+ paid accounts with zero disruption, using custom validation scripts to reconcile account and subscription data.
- Designed and built a **knowledge layer**: an ingestion pipeline that extracts decisions, facts, and events from company documents and Slack, has an AI curator validate each claim against its source, and serves the results to agents over MCP, so every AI answer is explainable and traces back to evidence.
- Designed and shipped the **public API gateway** in front of the Java / Spring Boot product services, securing it with AWS-style (SigV4) request signing and rate limiting. A TypeScript gateway runs in-cluster on EKS, and the OpenAPI spec is the single source of truth for codegen, docs, and validation.
- Co-built the **PowerMetrics MCP server** (AI-driven querying, relationship exploration, CRUD) and built the AI chat on top of it, which handles data analysis, renders visualizations, and answers natural-language questions about user data.
- Set up **ml-embedder**, a Python microservice serving text embedding models for Searchlight's hybrid (BM25 + vector) search over PowerMetrics assets in Elasticsearch, used by both users and the AI chat.
- Build and run TypeScript and Python microservices on EKS through Argo CD and Helm; lead root cause analysis on production incidents across service chains and ship the fixes.
- Maintained ~200 custom **data connectors** (including Snowflake and Databricks) in the **Java / Spring Boot** ingestion services, updating them as third-party APIs changed or deprecated.

Frontend Developer & Dev Lead, Design Team — Klipfolio

07/2020 – 06/2022 · Remote

- Led and mentored a team of 2 developers on the design team; turned designs into high-performance builds for klipfolio.com and powermetrics.app that grew organic traffic and leads.
- Took a **secure, embeddable live-metric service** from concept to production, letting customers embed live metrics in any website. Customers had been asking for it.

- Migrated Drupal 7/8 sites to Directus CMS (4,000+ images, 1,000+ posts), with infrastructure managed by Terraform on AWS EKS.

Full Stack Developer — Laurentian University IT

05/2018 – 12/2019 · Sudbury, ON

- Built an internal API giving secure, consistent access to the university's internal servers.
- Maintained the university's websites and student portals.
- Built a Flutter mobile app for welcome week, used by 2,000+ new students.

SKILLS

- **AI / Agents:** LLM agents, MCP, RAG & embeddings, hybrid semantic search, vector databases, Mastra, Anthropic SDK, LangChain
- **Backend & APIs:** Java, Spring Boot, Node.js, TypeScript, Python, Go, REST, gRPC, OpenAPI, JWT / OAuth, microservices
- **Infrastructure:** Kubernetes, Helm, Argo CD, Docker, Terraform, AWS (EKS), GCP, Cloudflare, GitHub Actions
- **Data:** Elasticsearch, MySQL, MongoDB, data ingestion connectors (Snowflake, Databricks)
- **Frontend:** React, Next.js, TanStack, design systems & tokens
- **Practice:** Code review, design reviews, ADRs, unit / integration / e2e testing, Agile

PROJECTS

- **Jordan Storage Units** (01/2026 – Present): Next.js site with Stripe integration to sell and promote a local storage-unit building.
- **nicolasvenne.ca** (04/2025 – Present): portfolio site where an AI agent answers questions about my work; TanStack Start on Cloudflare Workers.
- **gatsby-source-directus9** (2022): open-source Gatsby source plugin for Directus v9.

EDUCATION

B.Cosc, Computer Science, Specialization in Game Design — Laurentian University, 2016 – 2020

Thesis: ASCII Text 3D Map Generator (Unity, C#)

INTERESTS

- Video games
- Electric cars
- Woodworking
- Volleyball
- Cycling
- Rock climbing