



# Khoa Nguyen - Lead Data Engineer

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Lead Data Engineer and former Technical Lead with 10+ years of experience building and owning end-to-end data platforms from zero to business-critical scale. Proven track record delivering self-service analytics (80% adoption), powering low-latency customer-facing analytics (20% of product features), and driving 30%+ marketing impact through trusted metrics and scalable data architecture.

Regularly write technical articles on Medium, sharing guides on software engineering, data-related topics, and personal experiences from real-world projects.

## CORE SKILLS

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### Data Engineering & Architecture

- ETL / ELT pipeline design (Python-based)
- Event-based & behavioral data modeling
- Streaming + batch hybrid architectures
- Data quality, validation, and monitoring

### Data Platforms & Warehousing

- Amazon Redshift, ClickHouse
- Snowflake
- PostgreSQL, MySQL
- Performance tuning & query optimization
- Storage, partitioning, retention strategies

### Technical Leadership

- End-to-end platform ownership
- Architecture & technical decision-making
- Mentoring engineers & analysts
- Cross-functional collaboration (Product, Marketing, Finance)

### Analytics Engineering

- Dimensional modeling (fact & dimension tables)
- Metric definition & semantic layer
- dbt-based analytics engineering
- Self-service BI enablement

### Processing & Compute

- Apache Spark
- AWS Glue, Athena
- High-volume batch & near real-time processing
- Low-latency analytics pipelines

## PROFESSIONAL & ENGLISH SKILLS

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- Fluent English; extensive experience in international working environments
- Team leadership, mentoring, and technical alignment
- Effective collaboration in multicultural and distributed teams
- Strong stakeholder communication and technical facilitation

## PROFESSIONAL EXPERIENCES

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### Lead Data Engineer, Flodesk

Mar 2020 — Dec 2025

Flodesk is a design-focused email marketing platform enabling small businesses to grow through **email-driven marketing**.

- Acted as the technical lead and owner of the analytics and data platform, driving architectural decisions, technical roadmap, and cross-team alignment.
- Designed and owned the **company-wide data platform**, establishing a single source of truth for product, marketing, finance, and leadership.
- Built and maintained **scalable data pipelines** processing **100B+ email and user events**, ensuring reliability and consistency at scale.

- Implemented analytics engineering workflows (dbt-based) supporting standardized metrics and trusted reporting across teams.
- Enabled **self-service analytics** for internal teams, with ~80% of frequent users independently building and maintaining their own reports.
- Powered ~20% of customer-facing analytics features using low-latency, high-availability data systems.
- Improved marketing effectiveness by 30%+ through unified reporting, accurate attribution, and actionable insights.
- Optimized data platform costs via query tuning, partitioning, retention policies, and workload isolation.
- Collaborated closely with Product, Marketing, and Finance to translate business needs into scalable data solutions.
- Led the data team, including onboarding and mentoring of data engineers and analysts, and establishing team standards for data modeling and analytics engineering.
- Explored next-generation warehouse architectures by conducting a Snowflake proof-of-concept on a feature-specific analytics workload, evaluating performance isolation, cost scalability, and long-term architectural alignment for future data platform evolution.

## **Technical Lead / Software Designer, Kamora Limited Company**

Feb 2019 — Feb 2020

- Acted as Technical Lead & key contributor in delivering end-to-end product features across backend, frontend, and mobile platforms.
- Led system design and architecture decisions for multiple startup products targeting European markets, ensuring scalability and production readiness.
- Took ownership of core modules, mentored team members, and drove technical alignment in fast-paced, early-stage environments.
- Ensured stable releases and rapid iteration cycles, balancing speed and quality for client-facing European projects.

## **Technical Lead / Software Designer, Sioux High Tech Software**

Aug 2013 — Jan 2019

- Served as Technical Lead / key member in the design and delivery of large-scale, mission-critical systems for European enterprise and government clients.
- Led end-to-end system design, from requirements analysis to architecture definition and production deployment.
- Worked directly with European customers on technical requirements, architectural trade-offs, and long-term system evolution.
- Played a central role in delivering systems with high reliability, safety, and compliance standards.
- Collaborated and led within multinational engineering teams, maintaining high technical quality and best practices across distributed teams.

## **HIGHLIGHTED PROJECTS**

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### **Company-wide Data Platform & Single Source of Truth, United States**

- Built a unified data foundation consolidating **product, marketing, and finance data** into a consistent analytics layer.
- Established standardized datasets and metrics to ensure **data consistency and trust** across business functions.
- Enabled organization-wide analytics adoption, supporting **self-service reporting for ~80% of frequent users**.

### **High-volume Event Analytics for Email Marketing, United States**

- Designed a **high-throughput event ingestion and analytics system** handling 100B+ email and user events.
- Supported both **near real-time and batch analytics** for data exploration and customer-facing use cases.
- Provided a reliable analytics backbone for ~20% of customer-facing product features.

### **Self-service Analytics Enablement, United States**

- Developed analytics models and BI-ready datasets to support **self-service analysis across business teams**.
- Reduced reliance on ad-hoc data requests by enabling users to independently explore and answer business questions.
- Improved overall **data literacy and analytics efficiency** across the organization.

### **Smart Car, The Netherlands**

- Contributed to a **government-backed initiative in the Netherlands** aimed at reducing traffic congestion on **highway A58**.
- Built a system to **collect and process real-time vehicle telemetry data via USB** from in-car devices.
- Analyzed driving patterns and traffic conditions to generate **driver-facing instructions and speed recommendations**.
- Supported improved traffic flow through **real-time, data-driven guidance** delivered on mobile devices.

## ACHIEVEMENTS

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- Microsoft Certified Xamarin Developer
- Speaker at Vietnam Mobile Day

## EDUCATION

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### **Bachelor of Information Technology (Excellent)**

Da Nang University of Technology, 2008 — 2013

## Additional Information

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**Hobbies:** Football, Writing technical articles