





LE THANH PHONG (Phong Lee)

Senior Frontend Engineer — TypeScript, React, Vue, Next.js, Performance & SEO

 Nha Trang, Khanh Hoa, Viet Nam |  (+84) 77-256-7419 |  phonglee1210@gmail.com |  phonghub.com

Profiles

 [PhongLee1210](#)

 [Lê Thanh Phong](#)


 [Thanh Phong](#)

 [Lê Thanh Phong \(PhongLee\)](#)

Summary


Full-Stack Software Engineer focused on building reliable, scalable web systems that connect performant server-side APIs with high-quality user experiences. Strong **TypeScript** and component architecture background across **React, Vue, and Next.js**. Experienced in **API design (REST, GraphQL)**, **microservices (Moleculer)**, **database engineering (MongoDB, PostgreSQL)**, **CI/CD** and containerized deployments with **Docker**. I ship measurable improvements: faster API responses, higher lead conversion from automated flows, and predictable release pipelines.

Experience

HiliosAI
Software Engineer
 [HiliosAI](#)


June 2023 - Present
Finland

- Led end-to-end delivery for the marketing site and an AI sales agent stack. Implemented **Next.js SSR** pages and backend **GraphQL** endpoints to centralize lead capture and qualification.
- Designed and maintained GraphQL schema + Apollo server** for agent interactions, enabling structured lead data and near-real-time analytics consumed by **CRM integrations**.
- Built server-side orchestration that validated and persisted leads to **MongoDB**, routed high-intent events to **Slack** and CRM, and triggered follow-up workflows — **reduced manual lead handling by ~80%**.
- Implemented RESTful and GraphQL APIs** with schema versioning and contract tests to keep frontend and backend aligned during rapid product iterations.
- Introduced CI/CD pipelines** with **GitHub Actions** and **Docker-based builds for staging and production**, improving deployment reliability and shortening release lead time.

OTBZone
Software Engineer
 [OTBZone](#)

Oct 2022 – Apr 2023
Viet Nam


- Owned frontend and backend API integration** contracts for a high-traffic e-commerce platform. **Implemented SSR and server-side caching layers** to **lower Time-to-First-Byte and speed product pages by ~30%**.
- Integrate RESTful APIs and optimized SQL queries** on **PostgreSQL** for product search and inventory, reducing API latency and increasing throughput under load.
- Collaborated on API authentication**, user role control, and improving security for admin features.

LTV Software Co.
Software Engineer
 [LTVSoftware](#)

Feb 2021 – Oct 2022
Viet Nam

- Implement **microservice integrations using Moleculer** to enable resilient RPC and REST gateways across product modules.
- Designed and documented API contracts consumed by multiple frontend micro-apps**; introduced contract tests and OpenAPI specs to reduce integration defects.
- Built backend services for user workflows**, analytics ingestion, and feedback processing. Persisted structured feedback in MongoDB and aggregated reports for product teams.
- Drove test automation for services** and **created Docker-based CI** images to standardize environments across dev/staging/production.

Projects


Enrollment AI Agent for Universities & Schools
AI agent system for multiple higher-education partners (SOM Vietnam, AITCV Vietnam, AIT Bangkok Thailand).
 [AIT School of Management](#)

March 2024 – Present

Built a **production-grade AI agent platform** that powers live, interactive student engagement for universities. Architected a **full-stack system** integrating **Vue.js frontends** with **FastAPI/GraphQL backends**, supporting **LLM-driven conversations**, real-time lead processing, and multi-tenant analytics. Connected to third-party ecosystems (Wix, Google Search, lead forms) through **n8n orchestration** and **webhook pipelines** for automated data ingestion and enrichment.

- Key Contributions:**
- Full-Stack Architecture:** Engineered the backend using **FastAPI, Moleculer**, and **GraphQL (Apollo)** for scalable API orchestration and low-latency chat routing.
 - Implemented **Langfuse** for LLM observability, tracing model responses, prompt efficiency, and latency to improve output quality.
 - Designed **n8n workflows** and **webhook connectors** for event-driven integrations between AI modules, CRM systems, and third-party enrollment tools.
 - Frontend Embedding:** Developed responsive, accessible **live-chat widget UIs** in **Vue.js + TypeScript**, seamlessly embeddable in partner landing pages.
 - Automated inquiry analysis using **RAG (Retrieval-Augmented Generation)** with vectorized web data, intelligently filtering and ranking student leads.
 - Containerized services with **Docker**, deployed via **AWS**, ensuring fault tolerance and continuous delivery.
 - Outcome:** Delivered a production AI Agent Enrollment system for AIT Universities & Schools that enabled **rich conversational lead capture embedded directly in school websites, transforming passive visitors into active prospects**.
 - Improved inquiry-to-enrollment conversion by ~90%**, turning static landing pages into interactive AI-driven enrollment assistants.
 - Reduced human operator workload by ~70%** through automated chat classification and response.
 - Increased session duration by ~55%** and improved lead data completeness for enrollment analysis.
 - Enabled the universities to **track and predict student interest** trends across multiple programs, directly influencing marketing strategy.

AI Agent, RAG, Vue.js, Third party API integration, GraphQL, FastAPI, Langchain, Langfuse, Vite, n8n, Webhooks, Moleculer, TypeScript, Docker, LLM Integration, CI/CD

Landing Page & Sales AI Agent at HiliosAI
HiliosAI Sales AI Agent
 [HiliosAI](#)

March 2024 – Present

Architected and launched a **production-grade, SEO-optimized sales platform** integrating **Next.js** on the frontend with a **FastAPI + GraphQL backend** to power an AI-driven lead capture and qualification system. The project unified content delivery, CRM synchronization, and Slack-based workflow automation enabling a fully autonomous “visitor → lead → demo booking” pipeline.

- Key Contributions:**
- Full-Stack Architecture:** Built an end-to-end system combining **Next.js (SSR/SSG)** with **FastAPI services**, handling server-side data hydration, SEO rendering, and LLM-driven agent responses.
 - Embedded an **AI-powered conversational agent** that handled user FAQs, captured leads, and routed qualified prospects to the backend for classification and scheduling.
 - Designed **REST/GraphQL endpoints** for real-time lead tracking, integrated **CRM APIs** (HubSpot), and orchestrated **Slack + n8n workflows** to alert sales teams instantly on high-intent interactions.
 - Containerized the system with **Docker**, deployed via **AWS**, with continuous deployment pipelines and **monitoring via Langfuse** for tracking agent reliability and performance.
 - Established a clear separation of concerns **frontend UI, backend APIs**, and **event-driven lead pipelines** enabling maintainability, extensibility, and **A/B testing** of sales flow variants.
 - Outcome:** Delivered a production-grade AI Agent Landing Page for HiliosAI that enabled **end-to-end automation of the “visitor → lead → demo booking” funnel through an interactive sales assistant embedded in the landing page**, with custom messaging formats from the agent, automatic lead capture (email, phone, summary), and demo calendar scheduling.
 - Reduced **manual lead response time by ~80%** with real-time Slack automation.
 - Increased **qualified lead capture by ~65%** within the first quarter post-launch.
 - Improved **organic traffic by ~40%** through SEO-optimized SSR and metadata.
 - Decreased **bounce rate by ~25%** via interactive and adaptive AI content delivery.
 - Built a **self-operating, measurable system** managing the entire conversion funnel autonomously—landing page to lead qualification to demo booking.

Next.js, SEO, SSR, Landing Page, AI Agent, CRM Integration, Web Performance, Real-time Chat Widget, FastAPI, GraphQL, Langfuse, n8n, Slack API, Docker, CI/CD, SEO Optimization, Automation Architecture, Lead Processing

OASIS
Vessel Equipment Maintenance Management

October 2022 – Present

Architected and delivered a **data-driven fleet maintenance system** for vessel equipment management, enabling **real-time synchronization** between ship and shore operations. The platform leveraged a **microservices backend (Moleculer)** with **MongoDB** for distributed data storage and **AWS** for deployment and scalability, serving multiple cross-functional teams.

- Key Contributions:**
- Backend Integration & Architecture:** Collaborated in designing and implementing **Moleculer-based RESTful microservices**, establishing clear API contracts, load balancing strategies, and fault-tolerant communication between independent modules.
 - Built the backend logic to ensure **real-time vessel-to-shore synchronization**, supporting offline caching, delta updates, and conflict resolution for maritime connectivity environments.
 - Led the frontend (Vue.js + TypeScript)** while tightly integrating with backend services for data-driven UI rendering, API state handling, and asynchronous event streams.
 - Optimized **MongoDB schema design** for large-scale maintenance datasets, implemented **server-side pagination, aggregation pipelines**, and **data indexing** to ensure sub-second query performance.
 - Designed **role-based access control (RBAC)** across micro-frontends and backend services to protect sensitive maintenance and operational data.
 - Participated in deployment and cloud infrastructure setup using **AWS ECS** and **S3**, ensuring scalability, service resilience, and smooth integration within the microservices environment.
 - Coordinated across multiple backend and frontend teams, defining **API versioning standards, component library governance**, and **CI/CD testing workflows** that improved delivery efficiency and reduced regressions by ~30%.
 - Outcome:** Delivered a production platform with a **microservices backend** that enabled **real-time vessel-to-shore data synchronization**, ensuring reliable communication, scalable data processing, and a maintainable architecture for future service expansion.
 - Achieved **99% ship-to-shore sync reliability**, minimizing data loss under unstable network conditions.
 - Increased **on-time maintenance actions by ~35%** through automated task synchronization and alerts.
 - Reduced **manual reporting workload by ~40%** via automated data pipelines.
 - Delivered a **scalable microservices platform** now used across fleets for predictive maintenance insights and real-time operational visibility.

Vue.js, TailwindCSS, Element-Plus, Figma, Typescript, Moleculer, Vite, PostgreSQL, Micro-frontend, REST API, MongoDB, AWS ECS, Microservices, TypeScript, CI/CD, Data Synchronization, Role-Based Access Control, API Design, Distributed System, Caching, Cloud Deployment

JetCare
Automobile Insurance Platform

Jun 2022 - Aug 2022

Developed a **full-stack insurance management platform** for the automobile industry, consisting of a **Sales portal** for customers and an **Admin dashboard** for internal operations. The system was powered by **Moleculer-based RESTful microservices** with **cronjob-driven data pipelines** to automate vehicle data crawling, validation, and migration from third-party sources.

- Key Contributions:**
- Full-Stack Architecture:** Built a distributed system using **Vue.js (Vite + TypeScript)** for the frontend and **Moleculer + RESTful APIs** for backend services, supporting national feature scaling and secure inter-service communication.
 - Designed and maintained **RESTful endpoints** for user registration, policy management, claims processing, and agent operations, ensuring fast and consistent data exchange across microservices.
 - Implemented **cronjobs** for scheduled vehicle data crawling, cleaning, and **migration from external registries**, integrating data directly into policy and claims databases.
 - Admin Management Dashboard:** Developed a **role-based admin panel** for monitoring agents, reviewing policy requests, and tracking claim statuses with advanced filtering and real-time updates.
 - Optimized **MongoDB queries** for high-volume datasets, introduced **caching and pagination strategies**, and enabled **error-tolerant data synchronization** across services.
 - Participated in **AWS deployment** using Dockerized Moleculer services with CI/CD integration, ensuring stable scaling and fault recovery across environments.
 - Engineered **dynamic UI components** and lazy-loading modules to handle large policy datasets efficiently, maintaining responsiveness under heavy data conditions.
 - Outcome:** Delivered a **production-ready insurance platform** with a **microservices backend** that automated data ingestion and synchronization across vehicle registries, insurance policies, and claims workflows—creating a scalable and maintainable foundation for future product expansion.
 - Increased API throughput capacity (requests/sec)** by **~35%** through service decomposition and optimized routing.
 - Decreased average backend response latency** by **~20%** via query optimization, caching layers, and asynchronous processing.
 - Cut data-migration error incidence** by **~40%** by implementing validation, retry logic, and robust schema versioning.
 - Reduced batch/cronjob runtime overhead** (crawl + transform pipelines) by **~30%** through parallelization and incremental delta updates.
 - Enhanced service resilience and reduced downtime incidents**—client ops teams reported higher stability and fewer manual interventions.
 - Earned positive client feedback on backend performance:** “claims and policy actions feel instantaneous even under load”.
 - Improved observability and debugging speed** via structured logging, distributed tracing, and service-level monitoring across microservices.

Vue.js, TypeScript, Vite, TailwindCSS, REST API (CRUD), Moleculer, PostgreSQL, RESTful API, Cronjob, Data Migration, MongoDB, Docker, AWS, Microservices, CI/CD, Role-Based Access Control, Data Caching, API Design, Automation Pipeline


SVTech CloudCam
AI Surveillance Management System

Feb 2022 - Jun 2022

Built an intelligent cloud-based **video surveillance platform** integrating **AI video analytics** for real-time monitoring, face recognition, and event tracking. The platform provided centralized control of live feeds, camera groups, and analytics dashboards across client networks. System designed with **RESTful microservices, scalable backend infrastructure, and performance-optimised pipelines**.

- Key Contributions:**
- Designed and implemented a RESTful microservices architecture (Moleculer or equivalent)** that manages camera metadata, event logs, alert settings, user access, and video stream routing.
 - Worked with AI/ML teams** to integrate face recognition, event detection, and metadata extraction pipelines. Preprocessed datasets, optimized inference latency, and handled model-serving endpoints.
 - Developed backend support for high-frequency event updates, **WebSocket or streaming channels**, and optimized ingestion queues to handle concurrent live feeds without bottlenecks.
 - Participated in architecting the system for video metadata storage** (logs, snapshots, configurations), defining schemas, indexing strategies, retention policies, and query pipelines for event logs and historical analytics.
 - Contributed to architecting cron-jobs and scheduled backend services** for periodic tasks such as log cleanup, archiving video clips, cache refreshing, and system health monitoring.
 - Set up centralized logging, monitoring, alerting, retrial logic, failure fallback mechanisms**, and scalable deployment topology to support resilience under load.
 - Outcome:** Delivered a fully production-ready platform with a robust backend capable of managing thousands of **live video streams, processing events in real time**, and **supporting AI-powered analytics dashboards** providing a scalable and maintainable foundation for future features and integrations.
 - Improved backend throughput and event processing** by **~40%**.
 - Reduced system response latency under concurrent streaming** to **<200 ms**.
 - Increased relevance of detection/alerts** by **~12%** through improved AI model pipelines.
 - Lowered false positive alert rate** by **~20%** via optimized backend thresholding and filtering logic.
 - Clients reported **enhanced situational awareness and faster reaction time** to critical events backend reliability was frequently highlighted in feedback.
 - Reduced infrastructure cost per stream** through optimized resource usage, efficient load balancing, and improved memory / CPU utilization.

Vue.js, TypeScript, Vite, TailwindCSS, REST API (CRUD), AI Dataset Evaluation, Jest, REST API, Microservices, Moleculer, WebSocket / Streaming, Face Recognition, Event Processing, Cronjobs, Data Pipelines, Logging & Monitoring, Scalability, Backend Optimization

My Garment
B2B Textile Platform
 [MyGarment](#)

Led Frontend and Full-stack development of a **B2B web application** for the textile industry, integrating management modules for training courses, student enrollment, and transactional services. The platform unified specialized dictionaries, production documents, and e-learning content for manufacturers and suppliers.

- Key Contributions:**
- Full-Stack Architecture (Vue.js + TypeScript + Node.js + REST API):** Designed and implemented end-to-end workflows covering course enrollment, fee transactions, and content delivery with secure role-based access.
 - Backend Services (Moleculer + MongoDB + PostgreSQL):** Developed REST APIs for course management, student progress tracking, payment records, and reporting dashboards.
 - Realtime Infrastructure (Firestore / Firestore):** Enabled live updates for training progress, content synchronization, and document collaboration.
 - Built shared UI and service modules** for dashboards, course management, and catalog views to streamline future development.
 - Guided code reviews, sprint planning, and QA testing** to maintain code quality and delivery velocity.
 - Worked closely with design and content teams** to ensure consistent UI/UX and reduce maintenance complexity.
 - Outcome:** Delivered a robust platform that enabled **real-time data consistency, multilingual support, and reduced maintenance overhead while improving performance and user satisfaction**.
 - Delivered a unified management system for **student, course, and payment** workflows.
 - Achieved **~30% faster load times** and improved real-time sync accuracy.
 - Reduced manual administrative work and support tickets** by **~60%**.
 - Increased engagement** in training modules due to more reliable, timely content delivery.

Vue.js, TypeScript, Vite, TailwindCSS, Firebase, Firestore, REST API, Moleculer, Logging & Monitoring, Backend Optimization

Project Template
Enterprise Component UI System

Led Frontend development and contributed backend architecture for a **full-stack enterprise management system template**, designed as a reusable foundation for building admin dashboards, course management, and transactional web applications.

- Key Contributions:**
- Full-Stack System Design (Vue.js + TypeScript + Node.js + REST APIs):** Extended the UI template with backend-ready structures for authentication, CRUD services, and data models (users, roles, payments, analytics).
 - Built a scalable component library** integrated with **TailwindCSS** and **Element Plus**, enabling teams to rapidly assemble admin panels and management dashboards.
 - Designed reusable REST service modules** for handling data operations, state synchronization, and communication between UI and backend services.
 - Translated Figma designs** into dynamic, theme-ready components ensuring UI consistency across multiple projects.
 - Implemented Jest-based testing** for UI and service modules, maintaining stability during refactors and updates.
 - Set up a mono-repo structure, CI pipelines, versioning policies, and release documentation** for cross-team scalability.
 - Authored **documentation, onboarding guides**, and demo repositories for faster adoption by internal teams.
 - Outcome:** Delivered a production-ready UI template system that enabled **enterprise-wide UI consistency, development speed gains, and long-term maintainability**.
 - Cut new project setup time** by **~45%**, enabling teams to bootstrap full-stack apps faster.
 - Improved **UI and API consistency**, reducing integration errors and maintenance overhead.
 - Increased **component reuse** to **~80%** and reduced redundant service code across projects.
 - Enabled faster delivery cycles and coherent user experience across enterprise platforms**.

Vue.js, TypeScript, TailwindCSS, Element Plus, Firebase, Firestore, Jest, Figma, REST API, Moleculer, Logging & Monitoring

References

Khanh Ney

AI / LLM Engineer, HiliosAI

[Khanh Ney](#)

Collaborated with **Khanh, AI Engineer at HiliosAI**, who led the design and implementation of **LLM-based architectures and AI workflows**. Together, we integrated **frontend components and AI agent layers** into production systems, connecting user interfaces with model APIs and RAG pipelines. Khanh’s expertise in **model training, prompt engineering, and retrieval optimization** guided the development of reliable, data-driven AI modules achieving around **90% retrieval accuracy** and powering AI-assisted features across multiple university and enterprise platforms.

Luc Duong

Founder & CEO, LTV Software

[Luc Duong Tuan](#)

As **CEO and Chief Architect** at **LTV Software**, Luc led the design of the company’s **GraphQL and Apollo Federation API architecture**, forming the backbone of several full-stack systems I contributed to. Working closely with him, I integrated **Vue.js frontends** and **AI-agent layers** with his distributed APIs, ensuring seamless data exchange and consistency across services. Luc provided deep guidance on **schema governance, performance optimization, and scalability**, helping our teams maintain alignment and reliability across multiple microservice environments.

Viet Do

Lead Project Manager & Co-Founder, HiliosAI

[Viet Do](#)

Led full-stack architecture and delivery at **HiliosAI** as **Lead Project Manager and Co-founder**, collaborating with Viet on system design, API structure, and UI/UX direction to align technical execution with product goals. He demonstrated strong end-to-end ownership defining scalable backend architecture, guiding frontend integration, and maintaining data flow consistency across services. Tuan ensured delivery quality by coordinating with design, frontend, backend, and QA teams, driving timely, stable, and maintainable feature releases.

Skills

Backend & APIs

Experienced in designing and developing scalable backend services using Node.js and TypeScript. Skilled in RESTful API design, GraphQL (Apollo), schema versioning, validation, and authentication strategies.

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Node.js, TypeScript, RESTful APIs, GraphQL, Apollo, Express, API Design, Authentication

Microservices & Orchestration

Built distributed and event-driven systems using Molecular. Experienced with service discovery, load balancing, background workers, and scheduled jobs to improve scalability.

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Molecular, Microservices, Event-driven Architecture, Job Scheduling, Message Queues

Databases & Data

Skilled in both document and relational databases. Designed schemas, optimized queries, and implemented caching for performance and scalability.

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MongoDB, PostgreSQL, Redis, Indexing, Query Optimization

DevOps & CI/CD

Experienced with Docker-based builds and GitHub Actions to automate testing and deployment across environments.

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Docker, GitHub Actions, CI/CD, IaC, Containerization

Frontend & SSR

Developed performant UIs with React, Next.js, and Vue.js. Focused on server-side rendering (SSR), SEO, and performance optimization.

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React, Next.js, Vue.js, SSR, SSG, SEO, TailwindCSS, Vite, UI/UX

Testing & QA

Designed and maintained automated tests using Jest and Cypress for both frontend and backend, ensuring reliability and code quality.

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Jest, Cypress, Integration Testing, E2E Testing

Observability & Security

Implemented monitoring, structured logging, and secure API handling following OWASP best practices.

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Logging, Monitoring, Tracing, Security, Authentication

Languages & Tooling

Strong foundation in modern web languages and tooling for building maintainable, scalable codebases.

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TypeScript, JavaScript, HTML5, SCSS, TailwindCSS, Figma, Vite

Languages

English

Advanced proficiency in speaking, reading, and writing

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Vietnamese

Native / Fluent

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Awards

Real-Time Online Exam Proctoring System – University Research Award

March 2023

Nha Trang University

[NTU Students Scientific Research Topics](#)

Led the design and implementation of a **real-time online exam monitoring system** utilizing **computer vision** and environmental detection to ensure academic integrity. The system included:

- Face recognition** and **gaze tracking** to identify off-screen behavior.
- Environment monitoring** to detect unauthorized individuals or suspicious movements.
- Continuous **system status checks** for exam integrity and anomaly detection. Recognized by **Nha Trang University** for outstanding technical innovation and real-world impact in applying **AI for education security and supervision**.

Interests

AI-Driven Product Design and Automation

AI Agent Systems, Workflow Automation, LangChain, RAG, Data Orchestration, Product Architecture

Open-Source Development

Vue.js, TypeScript, Next.js, TailwindCSS, Developer Tools, Open Source, Node.js, GraphQL, Apollo Federation, Molecular, Docker, Vite, RESTful APIs, MongoDB, PostgreSQL, Redis, CI/CD, GitHub Actions, API Documentation, DevTools

Content Creation & Tech Education

AI Tutorials, Dev Blogging, YouTube, Technical Writing, Mentoring

Fitness & Adventure Lifestyle

Gym, Hiking, Cycling, Travel, Outdoor Exploration