

Alexander Manuel Sumolang

+49 176 368 468 96

codebyalexander@gmail.com

linkedin.com/in/lexms

Lexmanuel.com

Berlin, Germany

Summary

Full-stack engineer with nearly 5 years of experience delivering scalable, user-centered products. As the first technical hire at Tomorrow University, I helped grow the platform from pre-seed to post-Series A, supporting its evolution after securing \$10M in funding. Along the way, I learned to bridge product and engineering, translating complex requirements into clear technical scopes and measurable outcomes.

Over time, I’ve embraced sustainable engineering, building reliable, maintainable systems that prioritize long-term impact over short-term complexity. I shifted from asking “What tech should I use?” to “What problem are we solving, and how can we validate it?” I believe **value = result ÷ time**, because the longer it takes to deliver impact, the more that value decays. My focus is on delivering the right solutions efficiently and with purpose.

Core Competencies

- Frontend: HTML5, CSS, JavaScript, TypeScript, ReactJS, NextJS, Tailwind, Material-UI, Redux, Storybook, shadcn/ui
- Backend & Infra: NodeJS, Golang, Python, Nest.js GraphQL, REST, CDK, AWS (Lambda, DynamoDB, AppSync, EventBridge, S3)
- DevOps & Tools: Docker, Kubernetes, GitHub Actions, Jest, CloudWatch, Sentry, Grafana, K6, Clerk
- Database: MongoDB, Redis, PostgreSQL, RxDB, IndexedDB
- Analytics / ML: BigQuery, Looker Studio, TensorFlow, PyTorch, OpenAI API, LangChain
- Cloud Platforms: AWS, Fly.io, NeonDB, GCP

Key Achievements:

- **Feature Ownership:** Led end-to-end development (gathering requirements, designing, execution) of a flexible NPS feedback mechanism, enabling staff to customize questions without developer intervention and providing real-time evaluation dashboards for content creators; achieved a 90.67% completion rate with over 300 submissions per month.
- **Query Performance & Caching:** Reduced critical endpoint latency by over 40x (from 10.3s to 325ms) by implementing Redis-backed caching with request coalescing to avoid repeated Strapi computations; significantly improved user experience and backend throughput on high-traffic content pages.
- **Technical Problem Solving:** Improved homepage performance by 20x after identifying a hidden MongoDB bottleneck; used observability tools to analyze latency metrics, traced the issue through logs and dashboards, and resolved it by refactoring inefficient query patterns and optimizing indexes.
- **Performance & Cost:** Led production-grade DB migration with backup strategy, optimized provisioning, PgBouncer connection pooling, and observability tooling—reduced infra cost by 50% while supporting 100 RPS throughput and high availability.
- **AI-Powered Solution:** Designed and implemented an AI-driven onboarding assistant using OpenAI API and serverless architecture; led to 85% completion and 40% CTR on priority actions, automating early-stage user support.
- **Knowledge Sharing:** Actively contributed to peer code reviews and pair programming, fostering team-wide discussions on architectural decisions and best practices.

Professional Experience

Tomorrow’s Education GmbH – Full Time (Berlin, Germany)

Tomorrow University is a state-recognized private university of applied sciences based in Germany, specializing in sustainability and technological innovation. It is also the first accredited remote-only university in Germany.

Senior Software Engineer | January 2025 – Present

- Integrated OpenAI API to build a platform chatbot and personalized onboarding recommendations and build reliable API using **NestJS**. The onboarding flow achieved an 85% completion rate and 40% click-through on key actions, while the chatbot saw around 40 weekly active users
- Combined parallel routing, server components, and Suspense to progressively stream UI sections—reducing Largest Contentful Paint from 6s to 2s and significantly improving perceived speed.
- Conducted **stress testing** to ensure core systems remained stable under peak load, successfully handling 100 requests per second without errors.
- Created a **reusable form system** with schema-based validation (Zod), enabling faster development and consistent validation across all forms.
- Wrote technical specifications and contributed to system architecture decisions, making it easier to onboard other teams to the feature and ensure consistent implementation across projects

Mid-Level Software Engineer | September 2023 – December 2024

- Developed a webhook-based integration system reducing time-to-integrate for 3rd party tools
- Automated HubSpot workflows to remove manual lead processing, saving hours per week
- Built **event-driven architecture** for in-app program browsing and payments, reducing payment failure by 90%
- Applied clean code and repository pattern to improve service modularity and API flexibility

Junior Software Engineer | Nov 2020 – August 2023

- Built full-stack learner-facing web apps using React, TypeScript, and GraphQL
- Deployed and orchestrated containerized application using **Docker** and **Amazon ECS**
- Designed Strapi CMS schemas to streamline educational content management
- Cut DynamoDB read cost by over 98% using a Global Secondary Index with only essential fields
- Built notification system (Slack, email) using **AWS Firehose + DynamoDB**, delivering 100+ weekly updates
- Implemented real-time data pipelines from Strapi and DynamoDB to BigQuery, powering dashboards in Looker Studio

Education

- Indonesian Computer University
Bachelor of Informatics Engineering – GPA: 3.91 / 4.0 – Summa Cum Laude (Top Honors) (4.0 is the highest possible GPA)