


Alex Beverage

Senior Software Engineer

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Profile: Experienced Senior Software Engineer with 15+ years in scalable system design, CI/CD optimization, and cloud infrastructure for global organizations. Creator of AI-powered language learning apps, including tools for skill-level-based translation. Proficient in Java, Python, C#, and cloud-native platforms, with a focus on user-centric, innovative solutions.

Career

Projects	levelang.app	2025-	Paris
	French Language Features Trainer App	2023-	Paris
Criteo	Senior Software Engineer	2018-2021	Paris
Zalando	Senior Software Engineer	2015-2018	Berlin
Amazon	Software Development Engineer in Test II	2012-2014	Seattle
Microsoft	Software Development Engineer in Test I/II	2007-2011	Seattle / Los Angeles

Project	levelang.app – AI-powered translation service for language learners		
	<ul style="list-style-type: none">- Translates text to learner-appropriate proficiency levels rather than native-speaker complexity, using constraint-based prompt engineering to enforce grammatical boundaries per level and language.- Supports French, German, Italian, Mandarin Chinese, and Cantonese with phonetic transliteration, adjustable tone (casual, formal), and spoken/written mode selection.- FastAPI backend deployed on Fly.io with OpenTelemetry distributed		

tracing to Grafana Cloud and Prometheus metrics; React Native mobile app with Expo.

- Voice input pipeline: English audio transcribed via Gemini multimodal API, then routed through the existing translation service with session continuity across voice and text inputs.
- [Open-source MCP server](#) exposes the translation API to AI assistants (Claude Desktop, Cursor, Claude Code), enabling proficiency-constrained translation directly in developer workflows.
- Synthetic monitoring suite generates continuous requests across all language/level/mood combinations; AI-judge test framework validates translation quality when prompt changes are detected.
- Database-driven language configuration (Supabase + Redis caching) with device authentication, rate limiting, and per-request cost tracking with daily budget controls.

Project	French Grammar Quiz Service: github.com/beverage/language-quiz-service <ul style="list-style-type: none">- Designed and built an async API for AI-generated French grammar problems using FastAPI, Kafka workers, and Supabase/PostgreSQL, decoupling LLM generation from problem retrieval to ensure consistent response times.- Engineered a compositional prompt system that generates pedagogically-targeted grammatical errors (auxiliary verbs, participle agreement, pronoun placement) rather than relying on LLMs to "make mistakes".- Implemented full observability with OpenTelemetry metrics and Grafana dashboards; deployed on Fly.io with automated CI/CD.
Criteo	<ul style="list-style-type: none">- Contributed to our build-from-source based build system to drive our CI/CD and deployment systems.- Developed systems to decouple software from hardware on our internal cloud.- Responsible for the creation of SLA/SLO monitoring for our containerization platform and beyond.
Zalando	<ul style="list-style-type: none">- Analyzed, investigated, and saved significant revenue on 3rd-party solution costs measured in the millions of euros.- Built, upgraded, and optimized CI/CD systems as a service for many teams across all of tech, all of which were customizable for their specific needs as they liked. Results were from 5 teams to most of our tech organization within a few months.- Refactored, and repaired, and fixed compliance requirements in advance of GDPR for our internal LDAP systems.
Amazon	<ul style="list-style-type: none">- Enlarged, and enhanced test systems from prototypes servicing limited

use cases to all of the product - 10-20 internal services, several websites, customer servicing and customer facing.

- Aided, developed, and upskilled the QA team for their product domains.

- Microsoft**
- Built and contributed to test systems for data warehouse products.
 - Enhanced test runs from days to under to minutes.
 - Enhanced data warehouse test provisioning from hours to minutes.
 - Built a system for rapidly provisioning OLTP clusters, reducing provisioning time from hours to minutes.

Languages

English Native

French B1 Overall - Breakdown: A2 / B1 / B1 / B2

Overview of Tech Stacks Used

Where / What	Years	Various Technologies Used
Personal Projects	2023-	Java / C# / Python / Swift / AWS / GCS / PostgreSQL / Docker / OpenAI / FastAPI / Redis / React-Native / Kafka
Criteo	2018-2021	C# / Kotlin / Python / Ruby / MSSQLServer
Zalando	2015-2018	Java / Spring / Spring Boot / PostgreSQL / Redis / AWS / Docker / Kubernetes / Various Monitoring & Tracing Tools
Amazon	2012-2014	Java / Spring / AWS / Various Test Frameworks
Microsoft	2007-2011	C++ / C# / MSSQLServer / Hyper-V / Powershell

Education

Bachelors of Science, Computer Science 2007 Rapid City, SD, USA

South Dakota School of Mines and Technology (SDSMT)
