

# Alex Beverage

Senior Software Engineer

[www.beverage.me](http://www.beverage.me)

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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.



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[www.github.com/beverage](http://www.github.com/beverage)

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## Career

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

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**Project** levelang.app – AI-powered translation service for language learners

- 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

	<ul style="list-style-type: none"> <li>- tracing to Grafana Cloud and Prometheus metrics; React Native mobile app with Expo.</li> <li>- 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.</li> <li>- <a href="#">Open-source MCP server</a> exposes the translation API to AI assistants (Claude Desktop, Cursor, Claude Code), enabling proficiency-constrained translation directly in developer workflows.</li> <li>- Synthetic monitoring suite generates continuous requests across all language/level/mood combinations; AI-judge test framework validates translation quality when prompt changes are detected.</li> <li>- Database-driven language configuration (Supabase + Redis caching) with device authentication, rate limiting, and per-request cost tracking with daily budget controls.</li> </ul>
<b>Project</b>	French Grammar Quiz Service: <a href="https://github.com/beverage/language-quiz-service">github.com/beverage/language-quiz-service</a>
	<ul style="list-style-type: none"> <li>- 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.</li> <li>- 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".</li> <li>- Implemented full observability with OpenTelemetry metrics and Grafana dashboards; deployed on Fly.io with automated CI/CD.</li> </ul>
<b>Criteo</b>	<ul style="list-style-type: none"> <li>- Contributed to our build-from-source based build system to drive our CI/CD and deployment systems.</li> <li>- Developed systems to decouple software from hardware on our internal cloud.</li> <li>- Responsible for the creation of SLA/SLO monitoring for our containerization platform and beyond.</li> </ul>
<b>Zalando</b>	<ul style="list-style-type: none"> <li>- Analyzed, investigated, and saved significant revenue on 3rd-party solution costs measured in the millions of euros.</li> <li>- 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.</li> <li>- Refactored, and repaired, and fixed compliance requirements in advance of GDPR for our internal LDAP systems.</li> </ul>
<b>Amazon</b>	<ul style="list-style-type: none"> <li>- Enlarged, and enhanced test systems from prototypes servicing limited</li> </ul>

- 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.
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### **Languages**

**English** Native

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

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### **Overview of Tech Stacks Used**

<b>Where / What</b>	<b>Years</b>	<b>Various Technologies Used</b>
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

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### **Education**

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

South Dakota School of Mines and Technology (SDSMT)

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