Alain-Olivier Kouassi

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Professional Summary

Software Engineer (4+ years @ Microsoft) specializing in distributed systems, cloud reliability, and enterprise security. Proven ability to design and scale high-availability systems for 10M+ users, mitigate multimillion-dollar risks, and deliver resilient solutions under pressure. Expert in balancing scalability, compliance, and performance trade-offs, with a strong record of architecting solutions that drive enterprise reliability. Passionate about AI/ML infrastructure, privacy-preserving data systems, and resilient cloud-native identity solutions.

Core Skills

Distributed Systems & Cloud: Azure Hybrid Identity, High-Availability Services, Distributed APIs

Security & Compliance: Secure System Design, Threat Modeling, Privacy Compliance, Penetration Testing Remediation, GDPR Compliance

Programming & Development: Java, C#, Kotlin, Python, JavaScript/TypeScript, NodeJS, VueJS, Svelte, React Data & ML: KQL, SQL, MongoDB, ElasticSearch, Redis, Neo4j, PyTorch

Experience

Microsoft, Redmond, Washington

June 2021-September 2025

Software Engineer

Team: Azure Hybrid Identity

- Led crisis response for a global outage impacting 2M+ users, designing and deploying a distributed datetime handling strategy adopted service-wide.
- Restored mission-critical provisioning pipeline for a Fortune 1 retailer (1.5M+ employees) in 24h by architecting fault-tolerant system with proactive monitoring, detecting previously invisible tenant issues.
- Designed and shipped gateway security mechanism eliminating a class of attack vectors, mitigating \$10M+ enterprise risk.
- Drove system-wide improvements through BCDR, SDL, and Threat Modeling reviews across Azure Hybrid Identity.
- Implemented GDPR-compliant logging that preserved diagnostic depth while ensuring privacy compliance across services.
- Modernized password generation system implementing automated generation with enhanced entropy, improving credential security for Fortune 500 clients.
- Authored technical documentation, hosted deep-dive presentations, and mentored peers on complex edge cases.
- Designed algorithmic solution resolving multi-year API exception affecting Fortune 500 provisioning pipelines.

Blackboard, Indianapolis, Indiana

June 2020-August 2020

- Full-Stack Software Engineer Intern
 - Optimized education platform performance for Blackboard Ultra UI serving 5M+ students during global remote learning transition, implementing advanced frontend state management and performance tuning techniques that measurably improved accessibility and user engagement.
 - Resolved critical European compliance bug for international release, ensuring adherence to regional data handling requirements through systematic debugging and validation.

Doxpop, Richmond, Indiana

June 2019-August 2019

 $Full ext{-}Stack\ Software\ Engineer\ Intern$

• Migrated statewide court information systems to VueJS, significantly improving performance and enabling scalable component-based architecture for legal professionals.

Education

Bachelor of Science, Major in Computer Science, Minor in Economics

May 2021

Rose-Hulman Institute of Technology, Terre Haute, IN

Relevant Coursework

Machine Learning, Artificial Intelligence, Design and Analysis of Algorithms, Computer Security, Operating Systems