

Jay Butera

Sr. Software Engineer

Backend, Distributed Systems, Cloud

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Senior software engineer with 10+ years building large-scale distributed systems, high-throughput backend services, and secure financial infrastructure for Fortune 100 enterprises. Experienced in designing scalable microservices architectures, optimizing system performance, and delivering highly available, fault-tolerant cloud-native applications in AWS environments. Strong background in API design, data engineering, and event-driven systems, with a focus on reliability, observability, and production-grade distributed system performance at scale.

Experience

Amazon

Senior Software Engineer (Contract) – Retail Platform Services | May 2022 - Present

- Designed and shipped core services for a high-traffic retail backend, handling 100k+ requests per second with sub-50ms p99 latency across multi-region AWS deployments, ensuring high availability, scalability, and resilience under peak traffic conditions.
- Led migration of a legacy monolith to an event-driven microservice architecture on ECS/EKS, reducing deployment time from hours to minutes and cutting infrastructure costs by 35%, while significantly improving service isolation, deployment reliability, and system maintainability.
- Built real-time data pipelines using Kinesis, Lambda, and DynamoDB Streams, processing 50GB+ of event data daily and powering downstream analytics, reporting systems, and machine learning workloads.
- Implemented distributed tracing and SLO-based alerting with CloudWatch and OpenTelemetry, reducing MTTR for production incidents by 60% and improving end-to-end observability across distributed services.
- Mentored 5+ engineers on code review, system design, and operational excellence; drove adoption of reproducible CI/CD pipelines, testing strategies, and engineering best practices across the team.
- Optimized service performance through profiling, caching strategies, and query tuning, improving throughput by 20% across critical API endpoints and reducing latency in high-volume services.
- Designed and enforced API standards, schema validation, and backward compatibility practices, improving integration reliability, reducing breaking changes, and ensuring consistency across internal service communication.

PayPal

Senior Software Engineer – Payments & Risk Platform | September 2019 – May 2022

- Developed core payments services in Java and Go supporting millions of daily transactions, maintaining strict PCI-DSS compliance and 99.99% availability SLAs within a highly regulated, high-scale financial environment.

- Architected a fraud-detection feature pipeline integrating Kafka streams with an internal ML platform, enabling real-time transaction analysis and flagging suspicious activities in under 200ms.
- Led redesign of an internal authorization service using OAuth2/OIDC, eliminating a class of token-replay vulnerabilities and unifying authentication across 20+ downstream distributed services.
- Drove a database migration from a sharded MySQL cluster to a Postgres/Aurora setup without downtime, improving query performance 4x, increasing system reliability, and reducing long-term storage costs.
- Partnered with security and compliance teams on threat modeling, vulnerability remediation, and audit processes, consistently clearing 100% of critical findings before each quarterly release cycle.
- Built and maintained scalable REST and gRPC APIs for internal and external consumers, improving developer experience, service interoperability, and accelerating feature delivery across teams.
- Enhanced observability and production monitoring using metrics, logs, and distributed tracing, proactively identifying system bottlenecks and improving reliability under high transaction volumes.

Bank of America

Software Engineer – Trading & Risk Systems | March 2016 – September 2019

- Built and maintained backend services for a trading support platform in Java and Python, processing millions of trade messages daily under strict SOX and regulatory compliance requirements.
- Modernized a legacy batch risk-reporting system into a streaming architecture using Kafka and Spark, cutting end-of-day report latency from 6 hours to under 20 minutes and enabling near real-time insights.
- Designed REST APIs and data models for an internal client onboarding workflow, reducing manual review time by 40% and enabling scalable self-service integration for multiple downstream teams.
- Implemented encryption-at-rest, key rotation, and access auditing across sensitive data stores to meet internal security policies and external regulatory requirements.
- Automated deployment and configuration of environments using Ansible and Jenkins, reducing release cycles from days to hours and improving deployment consistency.
- Collaborated with cross-functional stakeholders, including product and infrastructure teams, to improve system scalability, performance, and reliability across distributed applications.

Education

University of Texas at Dallas

Bachelor's Degree in Computer Science

Technical skills

Languages: Java, Python, Rust, JavaScript/TypeScript, SQL, Go

Backend & Distributed Systems:

Microservices, REST/gRPC APIs, event-driven architecture, Kafka, RabbitMQ, DynamoDB, PostgreSQL, Redis, Elasticsearch, high-throughput systems, distributed system design, concurrency and scalability patterns

Cloud & Infra:

AWS (EC2, S3, Lambda, ECS, EKS, SQS, SNS, CloudWatch), Docker, Kubernetes, Terraform, Ansible, CI/CD automation, OpenTelemetry, infrastructure as code, containerized deployments

Security & Reliability:

OAuth2/OIDC, PCI-DSS, SOX compliance, encryption at rest/in transit, incident response, observability, monitoring, high availability, fault tolerance, resilience engineering