Sébastien Armand
Senior Staff Software Engineer

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INFO

📞 (+1) 510-679-4638
📍 San Francisco Bay Area
📅 Born april 23, 1984
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SKILLS

PROGRAMMING LANGUAGES
Go, PHP, SQL, JavaScript

TECHNOLOGIES
Kubernetes, Distributed Systems, MySQL, Memcached, ElasticSearch, RabbitMQ, Envoy, Kafka, Kinesis, Iceberg, parquet, SQS, Git, S3, gRPC & protobufs, Cloudflare, Fastly, Datadog, Grafana, DynamoDB, DuckDB

CONFERENCE TALKS

🎗️ 2024 - Laracon US
🏅 2023 - Longhorn

BOOK

📖 2014 - Extending Symfony 2

LANGUAGES

🇫🇷 French (native)
🇺🇸 English (fluent)
🇨🇳 Mandarin (fluent)

ON THE WEB

🐦 @khepin
🐙 @khepin
💼 LinkedIN

18 years of experience across startups and big tech, driving backend and distributed systems work at scale. Experienced in leading complex technical initiatives, improving performance, and scaling high-traffic platforms. At Square, helped grow products from zero to tens of millions in users and revenue across self-hosted and AWS environments.

SQUARE | STAFF ENGINEER - PRODUCT ENGINEERING | USA   JUNE 2018 - PRESENT

2024 - now | Staff Engineer - Product Engineering
- Organized an "unconference" for Square Engineering, brining together 50 of our most tenured engineers together to address our most pressing issues
- Restarted a long dormant project of migrating Square Online to a common AWS platform with the rest of the company
- Contracted external agency to gradually take over the maintenance of legacy Weebly product and customers
- Prototyped a new reporting platform now being evaluated for company wide adoption

2022 - 2023 | Tech Lead - Square Online
Tech Lead for all of Square Online's product engineering team (100 engineers)
- Transition all (billions) static assets to be served via CDN, drastically improving online store load times for customers all over the world
- Transition core commerce APIs to be cached via CDN, delivering massive performance and reliability improvements for popular online stores
- Prototyped and spearheaded the adoption of envoy as a service to service proxy, reducing S2S call latencies p95 by 60ms (~30%)
- Proposed and initiated project to finalize the Weebly merger by moving all Online solutions to use Square data as a primary source (delivered in 2024)

2018 - 2021 | Tech Lead - Online Store Operations
Tech lead for Square Online's store operation team while we worked on:
- Ongoing microservice migration, moving large functionality away from pre-existing monolith
- Integration of UPS as a preferred partner for shipping orders
- Fulfillment updates, with the addition of scheduled orders, timed menus, delivery partners (doordash, uber eats)
- Tech lead on main e-commerce service during period of hypergrowth and scale (covid), growing 10x in a few months
- Designed and developed advanced caching strategies for APIs essential to our handling of sudden growth
- Proposed, designed and developed a re-architecting of catalog data from MySQL to ElasticSearch, bringing end user latencies p95 down from 20s to 500ms, 40x improvement
- Designed and implemented adaptive algorithms that help our systems handle unexpected load in live and async workloads

WEEBLY (ACQUIRED BY SQUARE) | SOFTWARE ENGINEER | USA   MAY 2017 - JUNE 2018

Weebly is a website builder and hosting service. I worked on the team responsible for all e-commerce features of the platform.
- Product Reviews: this was the first project deployed in production on Kuberenetes. Also the first microservice broken up from the monolith, setting up the path for how we did microservices.
- Setup the main e-commerce API service for the platform. Still to date the largest of those with thousands of tests, hunreds of contributors, tens of thousands of merged PRs. The early approach, design and leadership were crucial to the long term success of the project.
- Square Catalog compatibility. One of the projects that helped realize the merger between Square and Weebly.

CREATIVE MARKET (AUTODESK) | PLATFORM SOFTWARE ENGINEER | USA

NOVEMBER 2014 – MAY 2017

Maintain and grow a digital goods marketplace serving over 3 million users. Some major features I worked on were:
- Real time sales dashboard for shop owners
- Shop Updates: a dynamic social feed enabling shop owners to share news about their new and existing products
- Loyalty Program
- Auto-download of purchases to Dropbox
- Purchase search allowing buyers to search and filter through their past purchases
- Support for markdown, video, 3D support to product pages and many customizations to each seller's main shop page.
- Updates to our open API platform for partners

Beyond the projects, I also contributed in other forms to the company:
- Main driver for having automated tests on the main application
- Identifying and resolving high risk application security issues
- Working closely with the support team, ensuring quick responses and a good experience for our customers
- Build and maintain the company's largest search index with real time updates
- Prepared, tested and ran our largest database migrations

SKILLS : PHP, MySQL, SQL Schema and Query optimization, Elasticsearch, Memcached, jQuery, Backbone.js, React.js, Continuous Integration, Unit Testing, Caching strategies, Performance profiling and tuning, DevOps

More past experience available in the
🌐 online version

ECOLE CENTRALE LYON | MASTER IN ENGINEERING | FRANCE

SEPTEMBER 2004 – NOVEMBER 2008

The Ecole Centrale de Lyon is a top 10 engineering school in France.
Third year specialization in Information Technology & Supply Chain Management.
Gap year in 2006 / 2007 split between two internships including my first opportunity to come to China.

Internships and study projects:
- 2008: configure and prepare deployment of an ERP system for Dalkia (heating & cooling management company).
- 2007: participate in an initiative to standardize mobile operating systems for Orange. This initiative is now part of LiMo (Linux Mobile Foundation)
- 2006: implementation and study on CRM (customer relationship management) softwares.
- 2006: network simulation and performance test for a new service discovery protocol for a research team, resulting in the publication of their research paper .
- 2004: study project on creating a portable cancer detection system for general practitioners. Assemply programming of the PIC microcontroller at the heart of the system.