LUC SARZYNIEC

Staff Software Engineer

CONTACT

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github.com/olbat
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SKILLS

Programming Languages
Java, Python, Perl, Ruby, C, SQL
Personal projects: Crystal, Rust

Datastore Technologies
DynamoDB, MySQL, Elasticache,
Cassandra, MongoDB, Elasticsearch

Streaming Technologies
Kafka, Kinesis, RabbitMQ,
EventBridge, SQS, SNS, Redis

Other Technologies
Spark, JanusGraph, Gremlin
AWS CDK, Puppet, k8s, Envoy

EDUCATION

Master of Research in CS
Machine Learning specialization
Université de Lorraine, 2011

Master of Computer Engineering
Software Engineering specialization
TELECOM Nancy, 2010

ONLINE CERTIFICATIONS

Cryptography 1, Stanford University

PROFESSIONAL SUMMARY

Staff Software Engineer with 15 years of experience in high-scale backend development, system design, and distributed computing. Proven leader in modernizing complex systems, architecting highly extensible and scalable solutions. Proficient across a wide range of programming languages, platforms and technologies.

WORK EXPERIENCE

STAFF SOFTWARE ENGINEER

Loyalty & Incentives department – Booking.com, Travel industry, Netherlands
2023 - Present

- Modernized systems at the core of Booking.com loyalty program, *'Genius'*.
- Leveraged AWS technologies to migrate existing on-prem batch processing systems to event-driven solutions, with extended product capabilities.
- Architected a new highly extensible & scalable progression engine for Genius, enabling better decoupling, new integrations and impactful product features.
- Collaborated with principals and architects to build a target architecture.
- Built & deployed new secured, low-latency services & APIs for high traffic.
- Led large-scale data migrations, including backfilling and data validation.
- Proactively led initiatives to remediate 50+ Security & Compliance gaps.
- Mentored engineers, provided technical guidance, led solutioning sessions.

SENIOR SOFTWARE ENGINEER

Accommodations Pricing area – Booking.com, Travel industry, Netherlands
2020 - 2022

- Migrated & re-architected the monolithic Perl core of a discounting product to Java services, with shadowing & validation to prevent impact on customers.
- Collaborated to implement new data pipelines, for efficient decision making and enabling machine learning powered dynamic pricing strategies.
- Iterated on dozens of discounting strategy ideas, to match a targeted ROI.
- Created a Bazel mono-repository and CI pipelines to speed up development, improve cross-project/team collaboration, and mitigate dependency issues.
- Led an initiative to improve testing and quality in all the team group's systems.
- Participated in the SOx audit of the product, presenting the tech narrative.

PUBLICATIONS

Design and Evaluation of a Virtual Experimental Environment for Distributed Systems – PDP'2013, Belfast

Kadeploy3: Efficient and Scalable Operating System Provisioning for Clusters – Usenix ;login:, February 2013

Scalability Testing of the Kadeploy Cluster Deployment System using Virtual Machines on Grid'5000 – CCGRID'2012, Ottawa

Adding virtualization Capabilities to Grid'5000 – CLOSER'2012, Porto

PERSONAL PROJECTS

libgen – Crystal C-bindings generator
icu.cr – Crystal binding for ICU library
groinc – Network packet sniffer
crypto – Standard crypto. algorithms
...more

LANGUAGES

English – Full professional
French – Native

BACKEND SOFTWARE ENGINEER

Third party inventory area – Booking.com, Travel industry, Netherlands
2018 - 2020

- Piloted the integration of a product into the company's brand new reservation management & payout systems. Built a payout reconciliation engine.
- Implemented reusable CI pipelines to automate software QA & deployment processes, increasing deployments frequency and reducing manual errors.
- Participated in the migration of Perl monolithic logic to Java micro-services.
- Actively shared knowledge on Kubernetes & service management topics.

SENIOR SOFTWARE ENGINEER

Search engines – Qwant & Xilopix, Tech startups, France
2014 - 2018

- Built a distributed computing framework leveraging RabbitMQ & MongoDB.
- Designed and developed the core of the *Xaphir* search engine: distributed crawlers, scrapers and indexers using the framework and Elasticsearch.
- Created automated product classification algorithms and ontology-based Wikipedia data extraction tools for *Qwant* search engine.
- Built CI pipelines to automate deployments & QA across the company.
- Release manager: weekly release of the engine, including a dozen components.

SYSTEM SOFTWARE ENGINEER (RESEARCH)

High Performance Computing department – Inria & Loria, CS Research, France
2011 - 2014

- Designed & created '*distem*', a light distributed emulation system (pre-Docker containers deployment, orchestration & configuration for research use-cases).
- Maintained & improved *'kadeploy'*, an OS deployment solution for clusters.
- Administration, improvements & development of the *Grid'5000* platform (1000+ machines, 30+ clusters, 10+ sites).