Sergei Shilko

Creativity is intelligence having fun - Albert Einstein

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BACKGROUND

ABOUT

I'm engineer with hands-on experience in backends, REST & RPC APIs, AWS cloud certified. Skilled with online social networks, realtime chat, video call, online booking, accounting & billing, search, online payments, fraud & risk systems. Proficient with Docker, AWS, PHP, Golang.

WORK EXPERIENCE

- **Senior Software Engineer - Billing & Accounting, Foundations (Go, K8s, AWS, GCP, PHP8) www.messagebird.com** ,
  Jun, 2022 - Present

  Working on foundation services built with Go, K8s, PHP, AWS, GCP: accounts, accounting, billing, payments.

  - REST APIs, OpenAPI v3, Google GRPC & protobuf APIs both in PHP8 and Golang 1.20
  - Backend apps for message delivery over different channels: SMS, MMS, Voice, WhatsApp, Viber...
  - Microservice architecture, platform services, product services, IaC, event bus, api-first, domain-driven design
  - Customer UI portal improvements to authentication: adopt JWT tokens, reworked containers startup/shutdown, unit-test coverage
  - Define and adopt SLO, SLI, alerting with Prometheus, Thanos & Graphana dashboards
  - CP Billing & Accounting runtime with >5000 RPS billing OLTP workers - high load async billing
  - Optimized high-load billing k8s cluster runtime performance, resulted in 60% cost reduction: opencensus, lightstep, jaeger
  - Optimized speed of Gitlab CI/CD pipelines for K8s deployments: gitlab, docker, k8s, helm
  - MEP billing, accounting, invoicing, pricing, quoting features in globally distributed multi-region app: golang/echo.v4, dynamodb/single-table
  - Accounting security features like 2FA, SSO, reCaptcha, rate-limiting ...
  - CPQ Quoting and Pricing project: set of APIs for self-serve application for creating custom enterprise sales offers

Head of Engineering at Tandem Language Exchange App www.tandem.net ,
Jun, 2016 - Feb, 2022   5 years 8 months

Leaderhip and hands-on role, 1M DAU, 12+ Engineers, 50+ employees, education domain. Microservices applications, grow & manage team, analytics, business continuity. Building and running software at scale.

- Scaled backend infrastructure from 1000 RPM to 80000 RPM, from 100kDAU to >1mDAU and <50ms API

response time
- Scaled backend capacity from 1000's of users to >15M users
- Applied cost savings plans and utilized AWS Spot instances to reduce costs by 32%
- Hired multiple AI/ML, Data, Backend and devOPS engineers.
- Migrated monolithic backend application into 15 independent services
- Introduced Golang & AWS Keyspaces/Cassandra, DynamoDB for high-load group chat application storage
- Promoted AWS Best Practices, executed AWS Well-Architected framework together with AWS solution architects
- Managed >40 EC2 servers across 3 AWS regions, migrated from AWS EC2 Classic to AWS VPC
- Updated codebase from PHP5 to PHP 7.4, Go 1.14 Docker 19, PHPUnit 9
- Supervised development of serverless microservices in Java/Kotlin/Golang & DynamoDB
- Split monorepository into >30 separate repositories with separate CI/CD
- Executed multiple refactoring projects in code, infrastructure, raw storage and databases
- Maintained backend roadmap and technology radar tech-radar.opensource.tandem.net based on ThoughtWorks
- Improved user retention analytics, subscriptions and overall revenue tracking
- Updated realtime messaging server RabbitMQ, secured authorization, added 3rd websocket/MQTT browser client
- Added support for in-app purchase gifting, subscription hold, grace periods, geo-search.
- Increased application infrastructure and performance/APM monitoring automation and alerting via NewRelic
- Built full CI/CD pipeline on AWS Pipeline inc. Blue/Green deployments and AWS ASG/AutoScaling
- Improved China & SEA connectivity via transparent HAProxy, ICP/Hosting issues resolved
- Built internal business KPI, retention, engagement and revenue tracking systems
- Enforced PHPUnit & integration testing, code reviews & code style policies
- Migrated application services into containers (Docker)

Senior FullStack Software Developer at Tandem Language Exchange App www.tandem.net ,
Jun, 2013 - Jun, 2016 ⏰ 3 years

Mature backend solutions for audio/video (tele)communications software. Developed public API for mobile clients.

- Implemented public API for native mobile clients
- Refactored old MVP prototype codebase
- Launched first production release 1.0
- Celebrated first 50 users sign-up on GA and first promotions on iTunes
- Deprecated legacy on-premise hosting and migrated into AWS EC2-Classic
- Celebrated '2015 Most innovative app of the year' award (Apple iTunes)
- Implemented PHP framework with open-source components
- Reduced API response times from >=2000ms to ~100ms
- Implemented critical app functionality: in-app messenger, real-time chat, community live feed, email-reminders, user search and more

Lead Software Developer at Yangutu LLC meetville.com,
Nov, 2011 - Nov, 2012 ⏰ 1 year

Working on web based social network.

- Added API for supporting external 3rd party Game-platform add-on's
- Added AMF Flex/ActionScript API Server for import/export of data to mobile platform
- Added Facebook, Instagram, VK and other social networks integrations
- Extended user data import and export API's

Software Engineer at eHarmony Inc www.eharmony.com ,
Aug, 2008 - Sep, 2011 ⏰ 3 years 1 month

eHarmony Reporting and Management Tools for Risk Management team.

- Developed CMS/RMS Internal service from specification to manage and automate risks and fraud detection
- Working with sensitive client payment information
- Extended CMS/RMS service with flexible and configurable multi-role authentication system for different regions

- Added support for localization and translation of CMS/RMS
- Added analytics and audit tools for tracking and optimizing team (users or the CMS/RMS) performance

Software Engineer at IponWeb www.iponweb.com ,

Aug, 2007 - Sep, 2011 🕒 4 years 1 month

SOAP/Rest API for real-time AD Exchange platform - RightMedia

- Worked on SOAP-API for high-load real-time advertising platform at scale
- Heavily extended and rewrote existing funtional test coverage, integrational e2e testing
- Covered many new edge cases in tests which lead to fixes in critical API parts

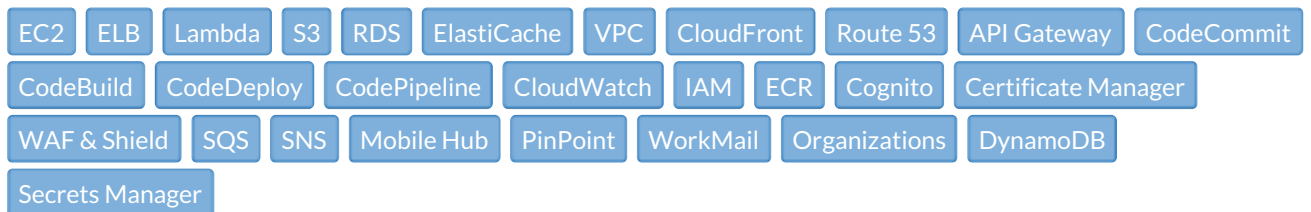## Software Engineer at Yahoo! yahoo.com,

May, 2008 - Mar, 2009 🕒 10 months

AD Exchange API - RightMedia

- Refactoring tests, code and documentation, working with remote Yahoo developers team. SOAP API. Perl. PHP5
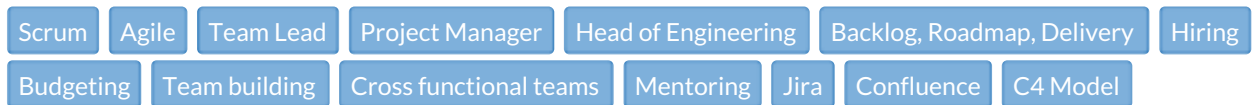
✂ SKILLS

AWS

`EC2` `ELB` `Lambda` `S3` `RDS` `ElastiCache` `VPC` `CloudFront` `Route 53` `API Gateway` `CodeCommit` `CodeBuild` `CodeDeploy` `CodePipeline` `CloudWatch` `IAM` `ECR` `Cognito` `Certificate Manager` `WAF & Shield` `SQS` `SNS` `Mobile Hub` `PinPoint` `WorkMail` `Organizations` `DynamoDB` `Secrets Manager`

Backend

`Golang` `PHP` `MySQL` `Redis` `Percona` `SphinxSearch` `ManticoreSearch` `Docker` `K8s` `Beanstalkd` `RabbitMQ` `AMQP` `MQTT` `Puppet` `Nginx` `Git` `PHPUnit` `NewRelic APM` `DataDog` `HAProxy` `Gitlab CI` `Symfony` `Graphana` `Prometheus` `AWS` `GCS` `Terraform`

Leadership, SDM, SDLC

`Scrum` `Agile` `Team Lead` `Project Manager` `Head of Engineering` `Backlog, Roadmap, Delivery` `Hiring` `Budgeting` `Team building` `Cross functional teams` `Mentoring` `Jira` `Confluence` `C4 Model`

🎓 EDUCATION

Experimental psychology, MSc Psychologe Pädagoge, Grodnenski Dzjaržauny Universitet

Sep, 2005 - Sep, 2010

Elektrische Energietechnik (Power engineering), Electrical Engineering, GGPEK Elektrotechnik College

Sep, 2000 - Sep, 2005

AWARDS

Ultimate Go , Certificate #1latfj6ukq
Awarded on: Jan 25, 2023

AWS Certified Solutions Architect - Associate (SAA) , Certificate #3GV5K7KKC14Q17W1
Awarded on: Dec 13, 2018

AWS Certified Cloud Practitioner , Certificate #3B28554BK2EQ1PSD
Awarded on: Nov 21, 2020

Telc Deutsch B1 Zertifikat , Certificate #0503718
Awarded on: May 01, 2018

INTERESTS

Events

Berlin - AWS Summit 2014, 2015, 2016, 2017, 2019   KubeCon + CloudNativeCon 2018, 2019

Podcasts, Forums, Interests

Golang radio-t.com 2014 - 2021   Habr habr.com 2008 - 2020   AWS Podcast 2016 - 2022

The WAN Show 2019 - 2023   UWP by Umputun 2016 - 2021   Tom's Hardware   agilemanifesto.org   12factor.net

Investment   Startups   Crypto

Reading

Management   Agile   Scrum   Sci-Fi   Fantasy   Horror   Clean Code   TDD   Architecting for the Cloud

Isaac Asimov   Robert Heinlein   George Orwell   Terry Goodkind   Alan Kuper   Tom DeMarco

Robert Martin: Clean Code: A Handbook of Agile Software Craftsmanship

Adrenaline Junkies and Template Zombies: Understanding Patterns of Project Behavior

Edward Yourdon Death March   Alan Kuper The Inmates Are Running the Asylum

Smart and Gets Things Done: Joel Spolsky`s Concise Guide to Finding the Best Technical Talent

Frederick P. Brooks, The Mythical Man-Month

E. Gamma Design Patterns. Elements of Reusable Object-Oriented Software

J. Hank Rainwater Herding Cats: A Primer for Programmers Who Lead Programmers   Allan Kelly: Xanpan

Designing Data-Intensive Applications: The Big Ideas Behind Reliable, Scalable, and Maintainable System

Jinesh Varia: AWS Architecting for the Cloud: Best practices

The Phoenix Project: A Novel About IT by Gene Kim, Kevin Behr, George Spafford

SCRUM The Art of Doing Twice the Work in Half the Time by Jeff Sutherland

The soul of a new machine by Tracy Kidder   The five dysfunctions of a team: a Leadership fable by Patrick Lencioni

Crossing the chasm: marketing and selling high-tech products to mainstream customers

The Deadline: A Novel about Project Management by Tom DeMarco

Solid Code: Optimizing the Software Development Life Cycle by Donis Marshall and John Bruno

The software development edge: essay on managing successful projects by Joe Marasco

Joel on software by Joel Spolsky   Why software sucks... adn what you can do about it by David S. Platt

Programming Collective Intelligence by Toby Segaran

97 things every software architect should know: collective wisdom from the Experts