



# Sergei Shilko

Creativity is intelligence having fun - Albert Einstein



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<https://sshilko.com>



English, German



## BACKGROUND



### ABOUT

I'm engineer with hands-on speciality in backends. I designed, built, deployed and added features to social network app, built REST & RPC APIs, proficient with AWS cloud. I designed and built scalable realtime chat, video call, online booking system, search, online payments, fraud & risk systems.



### WORK EXPERIENCE

#### • Senior Software Engineer [www.messagebird.com](http://www.messagebird.com), [MessageBird B.V.](#)

Jun, 2022 - Present

Building scalable foundation services: Golang, K8s, PHP, AWS, GCP, PHP8 for accounts, accounting, billing, payments.

- REST APIs, OpenAPI v3, Google GRPC & protobuf APIs both in PHP8 and Golang 1.20
- Developed microservices in platform system, product services, api-first, domain-driven design
- Developed Customer WEB/UI self-service portal
- Experimental psychology,
- Designed and implemented SLO/SLI metrics and alerting with Grafana & Prometheus for K8s apps
- Optimized Billing cluster runtime >5000 RPS ledger OLTP workers: 60% cost reduction
- Implemented runtime metrics with NewRelic, DataDog, OpenCensus, Lightstep, Jaeger
- Improved speed of Gitlab CI/CD pipelines for K8s Helm deployments
- Golang services in for billing, accounting, invoicing, pricing, quoting in distributed multi-region system: golang/echo.v4, dynamodb/single-table
- Improved security by implementing features like 2FA/MFA, SSO, reCaptcha, rate-limiting ...
- Contributed to complex CPQ Quoting and Pricing project: enterprise B2B pricing modeling

#### Head of Engineering [www.tandem.net](http://www.tandem.net), [Tripod Technology GmbH](#)

Jun, 2016 - Feb, 2022 ⌚ 5 years 8 months

Leadership 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 Frontend, 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
- Maintained all business infrastructure of >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 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 Software Developer [www.tandem.net](http://www.tandem.net), [Tripod Technology GmbH](#)

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 [meetville.com](http://meetville.com), [Yangutu LLC](#)

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 [www.eharmony.com](http://www.eharmony.com), [eHarmony, Inc](#)

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](http://www.iponweb.com), [IponWeb](http://IponWeb)

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

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

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

Software Engineer at Yahoo! [yahoo.com](http://yahoo.com), [Yahoo!](http://Yahoo!)

May, 2008 - Mar, 2009 ⌚ 10 months

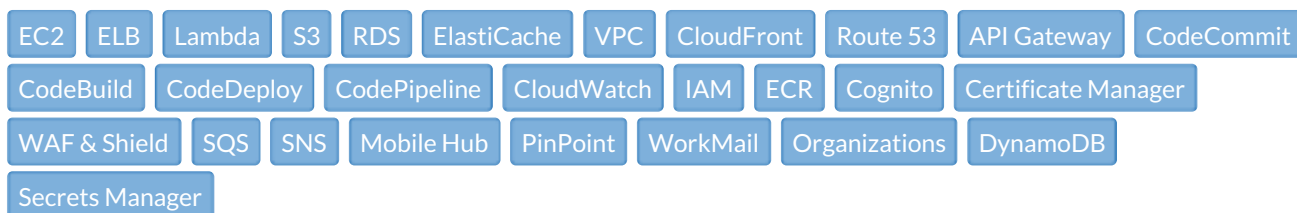
AD Exchange API - RightMedia

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

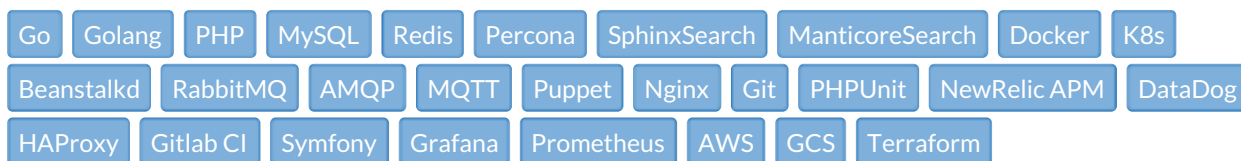


## SKILLS

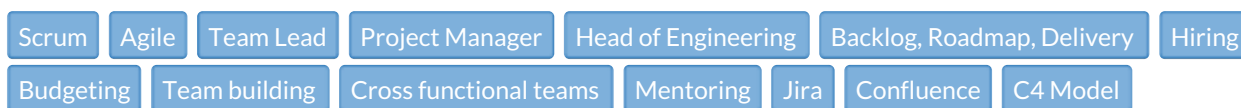
### AWS



### Backend



### Leadership, SDM, SDLC



## EDUCATION

- Experimental psychology, MSc Psychologe Pädagoge, Grodnenski Dzjaržauny Universitet
- Elektrische Energietechnik, Engineering, GGPEK Elektrotechnik College



## 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