

# Zack Bartel

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Systems developer building C/C++/Go/Java software on Linux. Career spent on distributed systems, data infrastructure, mobile, and full-stack development.

## Skills

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**Systems & Tools:** C/C++ Go Java Python Terraform PostgreSQL MySQL Redis

**Infrastructure:** Kubernetes AWS GCP Kafka Spark Flink Kinesis

**APIs & Web:** REST Spring Scala iOS Android

## Experience

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**Proofpoint**                   **Staff Software Engineer**                   **May 2019 – Present**

Designed and implemented large distributed data systems. Built security software in different fields including Remote Browser Isolation, CASB, DSPM.

- Lead geo-distributed teams building security software used by millions of users
- Manage dozens of Kubernetes clusters worldwide on GCP, AWS, and Baremetal
- Design and build microservices and APIs in Go and Java/Spring
- **Stack:** Go, Java, Scala, Typescript, Kubernetes, Kafka, NATS, Terraform

**DLVR**                   **Principal Software Engineer**                   **Sep 2014 – May 2019**

Built data collection, enrichment, and processing platform analyzing hundreds of thousands of events per second to optimize video Quality of Experience. System actively adjusts network routes and CDN selection per user session using realtime metrics fed to ML algorithms.

- Built video playback infrastructure and QoE data analysis system
- Managed hiring and built engineering team
- DNS, nginx, BGP, Layer 3/7 load balancing
- **Stack:** Java, Go, Kafka, Storm, Spark, Flink, Druid, Elasticsearch, Redis, NATS
- **AWS:** Kinesis, Lambda, DynamoDB, Redshift, ElastiCache, API Gateway

**Frequency**                   **Senior Software Engineer**                   **Dec 2009 – Sep 2014**

Built large-scale video indexing and delivery infrastructure. Led small teams and championed adoption of new technologies and development practices.

- Web video indexing system: 2000 URLs/sec crawl rate, thousands of images/sec served
- Video transcoding with redundant delivery and storage layers
- DevOps for hundreds of servers and services on AWS
- Built and shipped video apps for iPhone, iPad, Chromecast, Android, Android TV
- **Stack:** Java, Grails, MariaDB, TokuDB, RabbitMQ, Elasticsearch, Memcached, Redis, C++/Qt4

**GetBack Media**                   **Senior Software Engineer**                   **Mar 2008 – Dec 2009**

Designed and implemented frontend/backend systems for retro social media platform handling 1M page views/day. Built video and image delivery pipeline with cloud infrastructure.

- Ingested and normalized data from dozens of sources
- **Stack:** Java, PHP, Nginx, Solr, AWS

**Tectura**                    **Software Engineer**                    **May 2006 – Mar 2008**

Aerospace industry consulting. Built flight test software and flight data analysis tools for major aircraft manufacturer. Contributed to Linux kernel to solve client requirements.

- Cross-platform development for Linux Intel and PowerPC in C/C++
- Flight data (ACARS) analysis applications
- Custom GNU/Linux distribution development
- **Stack:** C, Java, PostgreSQL, Oracle 10G, SWT, Linux

**OSU Open Source Lab**                    **Software Developer**                    **Sep 2005 – Aug 2006**

Built open source network management tools for university network and hosting infrastructure for major open source projects.

- **Stack:** Java, PHP, MySQL, DNS, DHCP, Linux

**Business Solutions Group**                    **Student Software Developer**                    **Jun 2004 – Oct 2005**

Contract management software for university departments.

- **Stack:** C#, ASP.NET, IIS, SQL Server

## **Education**

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**Oregon State University**      Bachelor of Science, Computer Science      GPA: 3.7      2002–2006

## **Other**

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When not coding: teaching boxing, cooking, playing chess.