

# Oskar Jung

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- Languages: German (native), English (fluent)

## Core strengths

- Java, Scala, JavaScript, Clojure
- Hadoop, MapReduce, Hbase, Flink, Vertx, AWS, Docker, Node, Spark, Kafka, Redis, Aerospike, Postgres, Bash, Unix/Linux, Git

## Background

I'm a data / software engineer, traveler and enthusiast photographer from Berlin. I enjoy designing, building and maintaining software solving complex problems. In my career I have helped build both data intensive as well as real-time sensitive applications.

## Professional Experience

### 2017 – Present / (Senior) Data Engineer / mbr Targeting GmbH

Mbr targeting is a real-time bidding company. It provides a demand side - and data management platform allowing advertisers to run campaigns on multiple ad exchanges. The company specializes in user-centric optimization using machine learning algorithms. The system scales to more than 100.000 requests per second with a latency of below 100ms.

As data engineer I use and maintain a 1000 core petabyte-size hadoop cluster and another 250 core 500Tb HBase cluster. I help ingest terabytes of data per day. Apart from that I am also involved in planning, designing and implementing services for use in real-time-bidding systems and a data management platform with high requirements for low latency and high throughput. Because of the demanding performance requirements of our components I

learned a lot about production JVM systems. As part of a small team of data engineers I take part in the shared responsibility for our software components as well as for organizational tasks such as hiring and mentoring.

Core Responsibilities:

- Plan, design, implement and maintain features and components
- Prototype Data Management Platform utilizing a 3-dimensional data model in HBase
- Maintain Hadoop / Hbase clusters
- Extend core functionality of HBase with coprocessors and custom filters
- Take part in interviewing applicants
- Organize trial days of applicants
- Coach data scientists and other users of the hadoop cluster

Key Learnings:

- Data Engineering: Java/Scala, Flink, Hadoop/mapreduce, Hbase, Hive/Impala
- Backend: Scala, Aerospike, Elasticsearch, Kafka, AWS, Docker, Jersey

## **2016 - 2017 / Software Engineer / mbr Targeting GmbH**

As software engineer I helped to build a distributed real-time-bidding engine using machine learning approaches to calculate bids for more than 30,000 events per second. With a hard response time requirement of 100ms to answer each request the system has to be highly performant and scalable.

Core Responsibilities:

- Plan, design, implement and maintain features and components
- Implement high performance bidding engine

Key Learnings:

- Backend: Java/Scala, Node.js, Vertx, Guice, Aerospike, Redis, Kafka

## **2015 / Software Engineer / Adscale Labs (Christchurch, New Zealand)**

Adscale Labs is the development team of Adscale GmbH. Adscale is an ad exchange providing a supply side platform to publishers.

At adscale New Zealand I worked on supply side real-time-bidding infrastructure. I helped implement features in the real-time components as well as data aggregation and reporting jobs. The ad exchange handles auctions

requesting and responding to 140,000 bids per second.

Core Responsibilities:

- Implement and extend features and components

Key Learnings:

- Backend: Java, Spring, Hibernate, Postgres
- Data engineering: Spark

### **2013 – 2015 / Software Engineer (Working Student) / mbr Targeting GmbH**

When I started working at mbr targeting I bootstrapped and build a campaign management web console and worked on related services. I also worked on the event tracking infrastructure and on the bidding engine.

Core Responsibilities:

- Implement and extend features and components

Key Learnings:

- Fullstack: Node.js, Angular.js, Postgres
- Backend: Node.js, Redis, Aerospike, C++

## **Education**

**2012 – 2017 / Bachelor of Science Applied Computing / Hochschule für Technik und Wirtschaft Berlin**

At the Hochschule für Technik und Wirtschaft (HTW) Berlin I studied Applied computing specializing in mobile applications. I enrolled in courses ranging from distributed systems to functional programming. In my thesis "Implementing a Data Management Platform: Segmentation of Internet Users based on Tracking Data in a Wide-Column-Database" [1] I built a prototypical real time enabled Data Management Platform. The prototype was implemented using Apache Flink streaming and a data store with a 3-dimensional data model in HBase.

**2011 – 2012 / Information Technology / Universität Rostock**

**2010 / Abitur / Goethe-Gymnasium Demmin**