Ahmad Alhour

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Summary

A generalist software engineer and tech leader with 15+ years of work experience building cloud-based SaaS products with full-stack involvement: from frontends (web, mobile) to cloud infra (AWS, GCP) all the way through APIs, databases and services, with a speciality in building data-intensive distributed systems.

Work Experience

Shopify   *Jan 2022 - Present*
Staff Software Engineer   *Munich, Germany*

- Re-designed the merchant eligibility distributed system and moved it's signals from batch to real-time which improved the end-to-end latency of product re-indexing by 99.98% (from 48h down to 32s) which enabled the onboarding and offboarding of 2M+ merchants & 2B+ products in near-real-time
- Scaled the Product Understanding infrastructure to process machine-learning classification updates for products in real-time, going from 100K to 140M in 24h (140%) by scaling Redis, MySQL & Sidekiq workers
- Contributed to the database sharding project in Shop introducing Vitess as the primary sharding technology, which scaled MySQL's write throughput from 200K to 1M commits/day (5x improvement)
- Led the Shop Promise project across 3 teams, by designing the GraphQL API, backend services and UI integrations on the mobile app, and released it to 100M+ buyers on the Shop app marketplace worldwide
- Led Shop's Merchants Experience Group (7 teams; 40 engineers) to prepare for BFCM 2022 by designing load tests, scalability and fail-over plans which led to handling an anticipated 10x load: 8M+ merchants, 100M+ buyers and $7M+ in GMV (see: news.shopify.com/bfcm-record-stats...)
- Mentored my direct team on writing system design proposals, monitoring, observability & incident response
- *Full-stack development using Ruby, Python, Kotlin, GraphQL, Rails, Sidekiq, Kubernetes, Apache Spark, Apache Flink, Kafka, MySQL, Vitess, Google Bigtable & GCP*

AutoScout24 (AS24)   *Aug 2020 - Jan 2022*
Engineering Manager   *Munich, Germany*

- Managed a team of 8 senior engineers on making Europe's biggest car marketplace more safe and fraud-free
- Spearheaded the design, project management & stakeholder alignment for migrating AS24's Identity system to Scala, AWS & Okta which increased user growth by 37%, powering 20M+ users on iOS, Android & Web
- Re-designed the car-listings creation flow by incorporating machine learning classifications which decreased fraud listings by 40% and lost leads by 95% which led to increasing sales by 33%
- Mentored my direct team on software architecture, managing risks in software projects & soft skills

KI labs   *Sep 2019 - Aug 2020*
Data Engineering Lead   *Munich, Germany*

- Led a team of 6 data engineers across project planning, architecture, implementation & delivery
- Designed cloud-based big data platforms for Daimler, Lufthansa & JTI on AWS & GCP using modern data stacks such as: Snowflake, Databricks, Delta Lake, Google BigQuery & Apache Spark
- Open-sourced ***kaos***, a platform for simplifying Machine Learning deployments on the cloud (AWS & GCP) based on Python, Pachyderm, Terraform, Docker & Kubernetes: github.com/KI-labs/kaos
- *Full-stack development using Python, Java, Apache Spark, Apache Storm, Docker, Kubernetes, AWS & GCP*

TrustYou   *Jan 2016 - Sep 2019*
Tech Lead   *Munich, Germany*

- Led the Data team working on the Analytics Pipelines, processing 7M new hotel reviews weekly
- Led partnerships work with Glassdoor & Indeed, scaling TY's data platform to company reviews
- Led the Connect team, an API SaaS platform for integrating hotel partners with TrustYou
- Designed public API platforms for integrating big OTAs with TY, e.g.: Booking.com, TripAdvisor & Google Places, which increased TY's hotel portfolio from 40K to 400K (10x)
- *Full-stack involvement using Python, Java, PostgreSQL, Docker, Kubernetes, Hadoop, Apache Spark & Kafka*

CCC, D1G, CommunitiesTech, Freelancing   *Feb 2007 - Dec 2015*
Software Engineer   *Multiple locations*

- Several software engineering roles at different companies and locations. For more information, please refer to my LinkedIn profile: linkedin.com/in/aalhour

Education

B.Sc. Degree   *Princess Sumaya University for Technology*
Computer Science   *Sep 2007 - Jun 2011*

- *Capstone project: Natural Language Processing & Sentiment Analysis applications for Arabic Twitter.*
- *Participated in the global IEEEXtreme programming competition (9th place worldwide).*
- *Participated in the regional ACM ICPC programming competition.*

Online Training   *Google Cloud Training (Coursera)*
Data Engineering on GCP Specialization   *Jan 2020 - Apr 2020*

Online Training   *AWS Cloud Training (Coursera)*
AWS Solutions Architect Professional - Certification Track   *May 2023 - Present*

Side Projects & Open Source

Business
- **Sa7beh**: A mobile app that allows users to sign up with their social media accounts and participate in a gamified lottery experience to win free gifts, while advertisers benefit from a user base with valuable insights and engagement opportunities. The app was retired as it didn't find product-market fit.

Infrastructure, Data
- **kaos**: A platform for simplifying Machine Learning deployments on the cloud (AWS & GCP) based on Python, Pachyderm, Terraform, Docker & Kubernetes: github.com/KI-labs/kaos

Web Development
- Cookiecutter template for developing async Web APIs in Python 3 with SQLAlchemy's ORM: github.com/aalhour/cookiecutter-aiohttp-sqlalchemy

Educational
- Portable C# library of 35+ Data Structures and 30+ Algorithms: github.com/aalhour/c-sharp-algorithms
- COOL Language compiler, targeting the MIPS 32-bit architecture: github.com/aalhour/PyCOOLC
- 16-bit machine code assembler for the Hack Assembly language: github.com/aalhour/Assembler.hack
- Various other open source projects and utilities: https://github.com/aalhour

Technical Skills

Programming Languages	Python, Ruby, JavaScript, TypeScript, Java, Kotlin, Scala, Golang, C#
Web Frameworks	RubyOnRails, Spark (Java), Aiohttp, Flask, Django, React.js
Data Frameworks	Apache Spark, Apache Flink
Storage	MySQL, PostgreSQL, Vitess, Kafka, Hadoop, Hive, HBase, BigQuery, Bigtable, MongoDB
Areas of Experties	Web Apps, Data Engineering, Distributed Systems, System Design, Software Architecture