

# Ahmad Alhour

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## Summary

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A generalist software engineer and tech leader with 15+ years of work experience building cloud-based SaaS products with full-stack involvement: from their 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

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### Shopify

Staff Software Engineer

Jan 2022 - Present

Munich, Germany

- Re-designed the merchant eligibility system and moved 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)
- Re-designed existing Shopify Payments signals in Shop, which led to de-risking the marketplace resulting in onboarding 550K new merchants and 20M new products, while taking down 180K suspicious merchants
- Scaled the Product Metadata's Rails infrastructure to process machine-learning classification updates for products in real-time, going from 100K to 140M in 24h (140% improvement)
- Led the Shop Promise project and released it to 2M+ merchants & 100M+ buyers on the Shop app as part of Shopify's Winter 2023 Editions: [shopify.com/editions/winter2023](https://shopify.com/editions/winter2023)
- 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
- Mentored my direct team on writing system design proposals, monitoring, observability & incident response
- *Full-stack development using RubyOnRails, GraphQL, Python, TypeScript, ReactJS, Sidekiq, Kafka, Kubernetes, Apache Spark, Apache Flink, MySQL, Google Bigtable & GCP*

### AutoScout24 (AS24)

Engineering Manager

Aug 2020 - Jan 2022

Munich, Germany

- Managed a team of 8 senior engineers on making Europe's biggest car marketplace more safe and fraud-free
- Spearheaded the project management & stakeholder alignment for migrating AS24's Identity system to 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

Data Engineering Lead

Sep 2019 - Aug 2020

Munich, Germany

- Led a team of 6 data engineers across planning, architecture, implementation & delivery
- Designed cloud-based big data platforms for Daimler, Lufthansa & JTI on AWS & GCP
- Open-sourced *kaos*, a platform for simplifying Machine Learning deployments on the cloud (AWS & GCP) based on Python, Pachyderm, Docker & Kubernetes: [github.com/KI-labs/kaos](https://github.com/KI-labs/kaos)
- *Full-stack development using Python, Apache Spark & Storm, Terraform, Docker, Kubernetes, AWS & GCP*

### TrustYou

Tech Lead

Jan 2016 - Sep 2019

Munich, Germany

- Led the Data team working on the Analytics Pipelines, processing 7M new user reviews weekly
- Led partnerships work with Glassdoor & Indeed, scaling TY's data platform beyond Hospitality
- Led the Connect team, a SaaS platform for integrating hotel partners with TrustYou
- Increased TY's hotel portfolio from 40K to 400K by integrating big OTAs such as Booking.com, TripAdvisor and Google Places
- *Full-stack involvement using Python, PostgreSQL, Docker, Kubernetes, Hadoop, Spark & Kafka*

## CCC, D1G, CommunitiesTech, Freelancing

Software Engineer

Feb 2007 - Dec 2015

Multiple locations

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

## Education

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### B.Sc. Degree

Computer Science

Princess Sumaya University for Technology

Sep 2007 - Jun 2011

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

### Online Training

Data Engineering on GCP Specialization

Google Cloud Training (Coursera)

Jan 2020 - Apr 2020

### Online Training

AWS Solutions Architect Professional - Certification Track

AWS Cloud Training (Coursera)

May 2023 - Present

## Side Projects & Open Source

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### 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](https://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-aihttp-sqlalchemy](https://github.com/aalhour/cookiecutter-aihttp-sqlalchemy)

### Educational

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

## Technical Skills

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### Programming Languages

Python, Ruby, JavaScript, TypeScript, Java, C#, Kotlin, Scala, Golang

### Web Frameworks

RubyOnRails, Spark (Java), Aiohttp, Flask, Django, React.js

### Data Frameworks

Apache Spark, Apache Flink

### Storage

MySQL, PostgreSQL, Kafka, Hive, HBase, BigQuery, Bigtable, MongoDB

### Areas of Expertise

Web Apps, Data Engineering, Distributed Systems, System Design, Software Architecture