Alex Brod

Software engineering team lead

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Summary

Over 10 years of experience in software engineering, including 5+ years in leadership roles across both global corporations and startup environments. Proven track record of delivering high-quality, scalable, and reliable systems on time. Skilled in architectural design, team mentoring, and end-to-end planning and development. Recognized for strong technical expertise and a leadership style centered on empowering and growing individuals and teams. Seeking the next opportunity to lead, drive meaningful impact, and contribute to innovative, world-changing solutions.

Skills

- Leading software engineers—both senior and junior—toward successful deliveries
- Designing system architecture in microservice environments, both on-premise and in the cloud
- Tech Stack: **Python**, **Java**, **NodeJS**, **Flask**, **Spring Boot**, **MongoDB**, **RDBMS**, **Redis**, **SQL**, **Kafka**, **RabbitMQ**, **Linux**
- Cloud Platforms: Experienced with GCP and on-premise private clouds, using Kubernetes for orchestration

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Work Experience

2022-2025: General Motors

2022-2025: Software engineering team lead

- Managing and mentoring two teams delivering embedded and cloud-based software solutions for autonomous vehicle systems.
- Leading the development of a real-time in-vehicle recording system that captures sensor, perception, and planning data—optimized for performance and data transfer constraints.
- Designing and implementing a cloud-based configuration management system from scratch, supporting fleet-wide deployment and accommodating vehicle-specific software and hardware limitations.
- Developing core features and data pipelines in an advanced debugging platform using **Python**, **Flask**, **MongoDB**, and **NodeJS** to support analysis of complex autonomous driving scenarios across development and retail fleets.
- Significantly improved system scalability—from processing a few terabytes per day to hundreds of terabytes daily.
- Driving architectural design and technical leadership in a global environment, collaborating across teams in Israel and the U.S., and aligning with legal and engineering requirements of a large-scale automotive program.

2022-2022: Senior backend software engineer

- Owning all backend aspects of the application, from architecture to implementation.
- Designing the architecture and leading development of a triage application for autonomous vehicles (AV), significantly improving system scalability and efficiency. Built with **Python**, **Flask**, **MongoDB**, and **NodeJS**, and deployed on **Kubernetes** in an on-premise environment.
- Mentoring junior developers, setting coding conventions, and promoting best practices across the team.
- Conducting performance analysis on a core service to identify bottlenecks and propose improvements.

2018 - 2022: Senior Backend developer at Zemingo

- Designed and developed backend services from scratch using **Python** (**Flask**) and **Java** (**Spring Boot**), following microservice architecture principles.
- Gained experience across a wide range of architectures and use cases, adapting to diverse requirements.
- Deployed services on **Kubernetes** clusters in Google Cloud Platform (**GCP**), ensuring scalability and reliability.
- Integrated services with various data stores and message brokers, including **Redis**, **Firestore**, **MongoDB**, and **RabbitMQ**.
- Performed load testing and performance tuning on **Java**-based services to identify and resolve bottlenecks at scale.

2015 – 2018: Software development team lead at IDF (Unit 8200)

- Led a software development team in designing and implementing a comprehensive Data Flow Management Framework using **Python**, **Flask**, **Elasticsearch**, **MSSQL**, and **Hadoop**.
- Oversaw and actively contributed to system architecture and core development, ensuring scalability and high performance.
- Managed a team of up to 12 people (8 developers and 4 Oracle consultants), fostering collaboration and maintaining high productivity.
- Directed the development of a high-throughput data ingestion system—processing millions of records daily—loading large-scale datasets from **HDFS** into **Oracle databases** using Oracle Data Integrator (**ODI**) and **Java** APIs.

Education

- B.Sc Software engineering, Afeka - College of engineering
- Electronics Practical Engineer studies in Ort Givat-Ram, Jerusalem

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Languages

Hebrew – native proficiency Russian - native proficiency English – full professional proficiency