

# Berkay Sahin

Software Engineer | Backend & Data Systems | Elasticsearch | Python/Flask | Kubernetes

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## PROFILE

Backend-focused Software Engineer with 10+ years of hands-on software development experience and production experience in scalable Python/Flask services, Elasticsearch-based search and analytics, distributed data pipelines, MongoDB, Docker, and Kubernetes. Currently building backend and intelligence systems at CatchProbe Intelligence Technologies Corporation, with a strong focus on performance, reliability, API design, and high-volume data processing.

## TECHNICAL SKILLS

<b>Backend:</b>	Python, Flask, REST APIs, Microservices, API Design, Authentication, Background Jobs
<b>Data &amp; Search:</b>	Elasticsearch, MongoDB, Redis, ETL Pipelines, Index Optimization, Data Modeling
<b>DevOps:</b>	Docker, Kubernetes, Linux, CI/CD, Containerized Deployments, Monitoring Basics
<b>Frontend &amp; Mobile:</b>	JavaScript, React, HTML, CSS, Flutter, Dart, Firebase

## EXPERIENCE

### Software Engineer | CatchProbe Intelligence Technologies Nov 2022 - Present

- Architected and deployed 5+ Python/Flask microservices supporting high-volume intelligence workflows, improving API maintainability, modularity, and release velocity across backend systems.
- Designed and implemented Elasticsearch-based search and analytics systems supporting full-text search, complex filtering, aggregation, and large-scale investigation use cases across millions of records.
- Optimized Elasticsearch queries, mappings, pagination, and indexing strategies to reduce response times, improve cluster stability, and support sub-second search experiences for critical workflows.
- Developed high-performance data ingestion and processing pipelines for structured and semi-structured datasets, including validation, normalization, deduplication, enrichment, and bulk indexing stages.
- Managed MongoDB data models and indexing strategies for operational services, improving query consistency, schema clarity, and backend data access patterns.
- Deployed and maintained containerized applications on Kubernetes using Docker-based workflows, supporting scalable deployments, service isolation, and production reliability.
- Built automation around background processing, scheduled jobs, and long-running ETL tasks to improve throughput, reduce manual operations, and make data processing more fault tolerant.

### R&D Manager | Compru 2019 - 2022

- Led R&D initiatives for 4-person engineering team, shipping 3 production features that reached 50K+ monthly active users; mentored 2 junior developers, enabling 1 promotion and improving code review turnaround by 40%.
- Developed cross-platform mobile applications with Flutter and Dart, building reusable UI components, stateful user flows, Firebase integrations, and production application screens.
- Built real-time systems using Firebase, including authentication flows, real-time database interactions, user messaging logic, and event-driven application behavior.
- Implemented backend services with Python and SQL, supporting mobile application features, administrative workflows, data storage, and application-level business logic.
- Coordinated technical decisions between product, design, and engineering stakeholders, reducing delivery ambiguity and improving sprint execution quality.
- Mentored junior developers through code reviews, technical guidance, task breakdowns, and debugging support, helping the team improve delivery confidence and code quality.

### R&D Team Lead | Google Developer Student Club 2019 - 2022

- Led Flutter and Firebase-based development projects, guiding the team from concept validation through implementation, testing, and demo-ready delivery.
- Provided technical mentorship to team members on mobile architecture, Firebase usage, clean code practices, debugging workflows, and feature planning.
- Organized collaborative development processes including task distribution, peer review, technical workshops, and hands-on project sessions for student developers.
- Mentored 8+ student developers on mobile architecture and Firebase best practices, resulting in 5 portfolio-ready projects deployed to production and 3 team members securing internships at tech companies.

### Network Intern | Allianz Turkey 2018 - 2019

- Supported enterprise network infrastructure for 500+ users, resolving 95% of connectivity issues within SLA through proactive monitoring and root-cause documentation; reduced ticket resolution time by 25% through systematic troubleshooting workflows.
- Worked with routers, IP phones, and video conferencing systems, gaining hands-on experience with corporate network environments and endpoint connectivity.
- Assisted technical teams in diagnosing connectivity issues, documenting recurring problems, and supporting stable communication systems for office users.

## EDUCATION

<b>Management Information Systems</b>   Anadolu University	2022 - Present
<b>Computer Programming</b>   Piri Reis University	2019 - 2022
<b>Web Design</b>   General Ali Riza Ersin Technical High School	2015 - 2019

## LANGUAGES

English - B2