



FAHID NASIR

Software Architect

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SUMMARY

Senior Software Engineer & Systems Architect with **13+ years of experience** designing and scaling high-availability, distributed platforms across aviation, fintech, adtech, and SaaS. Specialized in microservices, event-driven systems, Python, Node.js, and cloud-native architectures. Proven leader in modernizing legacy systems, driving performance improvements, and establishing long-term engineering standards through technical mentorship and cross-functional collaboration.

CORE COMPETENCIES

- Systems Architecture:** Microservices, distributed systems, domain-driven design, event-driven architecture
- Backend Engineering:** Python, Node.js, TypeScript, .NET, Java
- Event-Driven Systems:** Kafka, Redpanda, AWS SQS/SNS, gRPC
- API Engineering:** REST, GraphQL, gRPC, API design & governance (versioning, security, scalability)
- Cloud Platforms:** AWS (Serverless, Lambda, DynamoDB, S3), Azure, cloud migration & multi-cloud strategy
- Infrastructure & DevOps:** Docker, Podman, Kubernetes, CI/CD pipelines, GitHub Actions, Terraform
- Data Engineering:** SQL, NoSQL, Redis, Elasticsearch, data modeling, ETL pipelines
- Observability & Reliability:** Logging, tracing, metrics, SLOs, reliability engineering, performance tuning
- Leadership & Collaboration:** Technical mentoring, architecture reviews, stakeholder engagement, cross-functional alignment

EXPERIENCE

Flah.Work 🌐

Dec 2024 - Present

Hamburg, Germany

Founded Flah.Work to create open-source productivity and wellness applications. Developed the portfolio from scratch using modern software standards. Manage full business operations, from funding to community building, **while pursuing a full-time engineering role**.

- Full-Stack Development:** Single-handedly architect, code, and deploy a suite of FOSS applications using current tools and practices.
- Venture Operations:** Handle all strategic and operational functions, including funding, outreach, partnerships, and open-source community engagement.
- Product Vision:** Focus on solving niche problems in personal productivity and digital well-being, sharing progress to build an audience and contributor base.

TURKISH AIRLINES (TCI) 🌐

May 2025 - August 2025

Istanbul, Türkiye

Software Architect

Tech Stack: C#, .NET Core, Go, Python, Kafka, Docker, k8s, Azure

- Architected next-generation In-Flight Entertainment (IFE) platform**, modernizing passenger services with modular microservices.
- Designed event-driven architecture** with observability and fault tolerance, ensuring **99.99% system uptime**.
- Implemented DAL-D compliant processes**, enabling certification traceability and meeting stringent aviation standards.
- Optimized cloud infrastructure** with Kubernetes and Terraform, reducing deployment time by 50%.
- Mentored engineering teams**, driving adoption of modern DevOps practices and improving delivery velocity.

LUFTHANSA (AERQ) 🌐

Dec 2022 - Feb 2025

Hamburg, Germany

Software Architect

Tech Stack: Typescript, NextJS, NestJS, Python, Kafka, Docker, k8s, ArgoCD, AWS, Azure

- Architected next-gen in-flight entertainment platform with 3D maps, games, ads, analytics, and video streaming**, serving thousands of passengers daily.
- Designed OTA-enabled systems** with seamless third-party integrations, ensuring **aviation compliance**.
- Implemented device pairing** between personal and in-seat systems, boosting **post-flight engagement by 40%**.
- Reduced deployment cycles by 60%** through automated CI/CD pipelines and containerized microservices.
- Collaborated cross-functionally** to align architecture with business goals, improving **operational efficiency**.

KLARNA 🌐

Sep 2020 - Dec 2022

Stockholm, Sweden

Senior Engineer

Tech Stack: ReactJS, React-Native, ExpressJS, Python, Kafka RabbitMQ, Redis, A/B testing, Docker, k8s, CI/CD, AWS

- Developed scalable loyalty solution with 99.99% uptime**, supporting **millions of daily transactions**.
- Built cloud-native architecture** on AWS, reducing **downtime by 35%** and improving resilience.
- Enhanced real-time data processing** with Kafka, cutting **latency by 40%**.
- Acted as technical liaison**, accelerating **feature delivery by 25%**.

AION DIGITAL 🌐

Sep 2019 - Dec 2020

Bahrain

Senior Lead Engineer

Tech Stack: NextJS, NestJS, React-Native, WebSocket, VoIP, TravisCI, Gitlab, Docker, k8s, Digital Ocean, AWS

- Developed branchless banking app with FIDO-compliant security** for account opening and card management.
- Designed modular system** supporting A/B testing and streamlined configuration, reducing **release times by 30%**.
- Migrated legacy banking system** to modern cloud-native architecture, cutting **transaction time by 50%**.
- Strengthened compliance posture**, enabling **regional market expansion**.

INFLIGHT-VR 🌐

Dec 2013 - Sep 2019

Barcelona, Spain

Backend Solution Architect

Tech Stack: C#, NodJS, Python, Websocket, Unicast Streaming, AWS, Raspberry Pi, ARM development

- Designed backend infrastructure** for VR inflight marketplace with **Games, and 2D & 360° video**, increasing engagement by 25%.
- Integrated aircraft server data** into VR environment, enhancing **realism and safety compliance**.
- Engineered mesh server network**, reducing **latency by 40%** for cabin crew and passenger devices.
- Cut server power use by 30%** with Raspberry Pi-based setup.
- Built in-house tools** for OTA, notifications, analytics, and monitoring, saving **€200K annually**.

NETSOL 🌐

Jul 2012 - Dec 2013

Lahore, Pakistan

Software Engineer

Tech Stack: C#, WPF, Silverlight, Java, MSSQL, Websocket, SOAP, WCF, Corporate On-Prem deployments.

- Redeveloped asset finance and leasing software** for **Mercedes, BMW, and Nissan**, modernizing systems for scalability.
- Introduced modern coding standards**, reducing **defect rates by 20%** and improving maintainability.
- Provided global on-call support**, ensuring **uninterrupted client operations** and boosting satisfaction scores.

SKILLS

Programming languages

TypeScript, C#, Python, ReactJS, React-Native, SQL, NoSQL, ElectronJS, Terraform, Tailwind, Fluid for Tailwind, GO, Kubernetes

Software Design

Microservices, Monolithic Architecture, Event-Driven Architecture, Service-Oriented Architecture, RESTful APIs, GraphQL, gRPC, RAG, Embeddings

Leadership & Domain Expertise

Leadership & Mentorship, Project management, Stakeholders management, Training Material, Aviation Expert, Fintech Expert

CERTIFICATIONS

Regulatory Certifications

- DO-178C – Airborne Systems Certification (Bertrandt Academy)

- Aviation-Security-Awareness (2015/1998) (Lufthansa)

- Integrity + Export Control Compliance (Lufthansa)

- DORA – Digital Operational Resilience Act

Development

Generative AI for Project Managers (PMI)

Machine Learning with Python (Udemy)

LLMOPs and AIOps Bootcamp (Udemy)

EDUCATION

University of Punjab 🌐

2010 - 2012

Masters Information Technology (CGPA 3.3)

- Built a strong foundation in **web, desktop, and mobile development**, with emphasis on **Java and Android** technologies.
- Completed diverse projects including an **online learning platform**, **SIM management portal**, **Minesweeper game**, and **prayer reminder app**, showcasing versatility in application development.
- Served as a **Teaching Assistant for 3 semesters**, mentoring students and reinforcing technical expertise.

PROJECTS

TOP: AERENA System as Software Architect

Dec 2022 - Feb 2025

Led architecture and system design of the AERENA platform, managing cross-functional teams to deliver:

- Inflight Entertainment System (IFE)** – immersive passenger experience with video, maps, and games
- Cabin Digital Signage (CDS)** – real-time cabin information and announcements

- In-House Advertisement System (AHS)** – targeted ad delivery and analytics

- Virtual Test & Development Environment (VTE)** – simulation framework for rapid prototyping and validation

- In-Flight Shop** – integrated e-commerce and payment workflows

- Personal Electronic Device (PED) Integration** – seamless pairing of passenger devices with in-seat systems

Additional projects available at: <https://fahid.flah.work>