

# M Arslan Arshad

SENIOR SOFTWARE ENGINEER · BACKEND SPECIALIST

Dubai, United Arab Emirates

+971 56 46 19057 | arslanarshad07@gmail.com | arslan77 | iamarslan

*“Passionate about building scalable distributed systems and leading technical initiatives in high-growth technology companies.”*

## Professional Summary

Accomplished Senior Software Engineer with over 7 years of progressive experience in designing, developing, and scaling distributed systems for leading technology companies in the Middle East and South Asia. Currently serving as a Senior Software Engineer at HungerStation (Delivery Hero), specializing in backend microservices architecture and third-party integrations.

Demonstrated expertise in building high-performance, fault-tolerant systems using modern technologies including GoLang, Java (Spring Boot), and PHP (Laravel). Proven track record of delivering mission-critical solutions in Fintech (Careem Pay) and FoodTech (HungerStation) domains, with deep knowledge of payment processing, API integrations, and cloud infrastructure.

Technical leadership experience includes mentoring engineering teams, establishing architectural standards, and driving best practices in microservices design, code quality, and system observability. Strong advocate for clean code principles, test-driven development, and continuous improvement in software engineering processes.

## Technical Skills

<b>Programming Languages</b>	Go (Golang), Java, PHP, Python, JavaScript (Node.js), C++, SQL
<b>Frameworks &amp; Libraries</b>	Spring Boot, Laravel, Gin, Echo, Express.js, Hibernate, Vue.js, React (basics), Android SDK
<b>Databases &amp; Storage</b>	PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch, DynamoDB, InfluxDB
<b>Cloud &amp; Infrastructure</b>	AWS (EC2, S3, RDS, Lambda, CloudWatch), Docker, Kubernetes, Terraform (basics)
<b>DevOps &amp; CI/CD</b>	Jenkins, GitLab CI, GitHub Actions, ArgoCD, Prometheus, Grafana, ELK Stack
<b>Architecture &amp; Design</b>	Microservices, RESTful APIs, gRPC, Event-Driven Architecture, Message Queues (Kafka, RabbitMQ)
<b>Methodologies &amp; Tools</b>	Agile/Scrum, TDD, Design Patterns, SOLID Principles, Git, JIRA, Confluence
<b>AI Development Tools</b>	Claude AI (Code & API), GitHub Copilot, Cursor AI, ChatGPT, Custom AI Agents, Prompt Engineering
<b>Domains</b>	Fintech, FoodTech, IoT, EdTech, Payment Processing, System Integration

## Professional Experience

### HungerStation (Delivery Hero)

Dubai, UAE

Oct. 2023 - Present

SENIOR SOFTWARE ENGINEER (BACKEND)

- Serving as a key member of the Integration Squad, responsible for building and maintaining critical communication channels between HungerStation's platform and external vendors, restaurant partners, and third-party service providers across Saudi Arabia.
- Designing and implementing scalable microservices that ensure seamless order flow and data synchronization between HungerStation's core platform and 50+ integrated restaurant chains and logistics providers.
- Developing compliance validation services to ensure all orders adhere to policies set by local government authorities, implementing automated checks and real-time monitoring systems.
- Optimizing GoLang-based backend services for high concurrency, reducing API response times by 35% through efficient caching strategies, database query optimization, and connection pooling.
- Collaborating with product managers and cross-functional teams to define robust API contracts, implement comprehensive error handling, and establish service-level agreements (SLAs) for integration endpoints.
- Implementing observability solutions using Prometheus and Grafana, enabling proactive monitoring of integration health, performance metrics, and system reliability.
- Mentoring junior engineers through code reviews, pair programming sessions, and knowledge sharing, establishing best practices for microservices architecture and clean code principles.

## Careem (Uber Subsidiary)

Lahore, Pakistan

### SR. SOFTWARE ENGINEER I

Apr. 2022 - Sep. 2023

- Contributed to the Backend Supply Gate team within Careem's ride-hailing platform, working on critical services that manage driver supply, availability, and dispatch logic across the Middle East region.
- Developed and maintained services using diverse technology stacks including Laravel (PHP), Spring Boot (Java), and MEAN Stack (MongoDB, Express.js, Angular, Node.js), demonstrating versatility across different architectural patterns.
- Architected scalable backend solutions to handle millions of ride requests daily, implementing efficient algorithms for driver-rider matching, supply-demand balancing, and real-time location tracking.
- Optimized database queries and caching mechanisms to improve system performance, reducing response times for critical driver assignment operations by 40%.
- Collaborated with mobile teams to design and implement RESTful APIs consumed by iOS and Android applications, ensuring robust error handling and comprehensive input validation.
- Participated in on-call rotation for production support, troubleshooting critical issues, and implementing fixes to maintain high availability for Careem's ride-hailing services.
- Contributed to architectural discussions and technical decision-making, evaluating trade-offs between different approaches and ensuring alignment with engineering best practices.

## LearnOBots

Islamabad, Pakistan

### LEAD SOFTWARE ENGINEER

Oct. 2018 - Mar. 2022

- Led engineering efforts at a pioneering EdTech startup specializing in STEAM (Science, Technology, Engineering, Arts, Mathematics) education, driving technical strategy and team development for multiple flagship products.
- LearnOSTEAM Platform:** Architected and developed a comprehensive learning management system serving young students, integrating with multiple open-source educational tools and providing real-time progress tracking across 50+ schools and 10,000+ students.
- Built custom educational simulators and interactive learning modules, creating engaging experiences for students while maintaining detailed analytics on learning outcomes and student engagement.
- Implemented scalable backend infrastructure using Python Django, deployed on Kubernetes clusters with CI/CD pipelines via Jenkins, ensuring 99.9% uptime during critical examination periods.
- Utilized Redis for session management and caching, AWS S3 for media storage, and designed microservices architecture to handle concurrent access from thousands of students.
- POULTA - IoT Poultry Management System:** Designed and developed an innovative IoT-driven platform for the poultry industry, enabling farmers to digitize and optimize their operations through real-time monitoring and predictive analytics.
- Built comprehensive data capture system integrating manual entries with IoT sensor data from 500+ devices deployed across multiple farms, monitoring critical parameters including feed consumption, water intake, mortality rates, and environmental conditions.
- Developed predictive algorithms to detect abnormalities in flock behavior and health metrics, providing early warning alerts to farmers and enabling proactive intervention to prevent losses.
- Implemented full-stack solution using MEAN Stack (MongoDB, Express.js, Angular, Node.js), integrated with AWS IoT Core, AWS Greengrass for edge computing, AWS Lambda functions for serverless processing, and AWS SES/SNS for notifications.
- Programmed Arduino-based IoT devices using C++ to collect and transmit sensor data reliably, ensuring robust device-to-cloud connectivity even in challenging farm environments.
- Managed a team of 5 engineers, conducted code reviews, mentored junior developers, and established engineering processes including agile methodologies, version control workflows, and quality assurance practices.

## Brainyloft (Remote)

Philadelphia, USA (Remote)

### SR. SOFTWARE ENGINEER

Mar. 2018 - Sep. 2018

- Worked remotely for a Philadelphia-based tech startup, contributing to the development of innovative SaaS products for marketing automation and transportation management.
- Volumefy - Instagram Marketing Tool:** Developed an automated Instagram growth platform designed to increase user followers through intelligent engagement strategies.
- Implemented automated commenting system with configurable patterns, auto-posting capabilities, and intelligent auto-unfollow features to optimize follower growth while maintaining platform compliance.
- Built scalable backend using custom PHP framework, integrated Python Scrapy for web scraping Instagram data, and utilized Selenium for browser automation to simulate organic user behavior.
- TrackMyShuttle - Real-time Transit Tracking System:** Architected and developed a comprehensive shuttle tracking solution for transportation companies operating in New York City.
- Integrated GPS devices installed in shuttles to collect real-time location data, processed and displayed routes on Google Maps with accurate ETAs for all bus stops.
- Developed predictive analytics system using machine learning to forecast traffic patterns in New York City, providing drivers with proactive guidance about potential delays and optimal routing.
- Implemented real-time alert system to notify drivers and passengers about delays, route changes, and estimated arrival times, significantly improving service reliability and customer satisfaction.
- Designed scalable architecture to handle real-time data from 100+ shuttles simultaneously, ensuring low-latency updates and reliable system performance during peak hours.

## HISDU - Punjab & Sindh Healthcare Department

Lahore, Pakistan

SR. SOFTWARE ENGINEER

Jun. 2017 - Feb. 2018

- Worked with government healthcare department to develop mission-critical software systems for public hospitals across Punjab province, directly impacting healthcare delivery for millions of citizens.
- MedicoLegal Certificate System:** Designed and developed a secure, centralized system for creating and managing Medical Legal Certificates (MLCs) across all government hospitals in the province.
- Implemented robust security measures and digital signatures to prevent certificate fabrication and ensure authenticity of medico-legal documentation, critical for law enforcement and judicial proceedings.
- Built real-time analytics dashboard providing provincial government with comprehensive insights into MLC statistics, trends, and patterns across all hospitals, enabling data-driven policy decisions.
- Developed using .NET MVC 5 framework with SQL Server database, implemented Redis caching for performance optimization, and ensured HIPAA-compliant data security measures.
- Electronic Medical Record (EMR) System:** Architected and developed a comprehensive EMR solution for Tehsil and District healthcare units, digitizing patient records and clinical workflows.
- Implemented features for doctors to access complete patient medical history, request and review lab reports, track prescriptions, and maintain continuity of care across multiple visits and healthcare facilities.
- Developed companion Android application enabling mobile access to patient records, allowing healthcare providers to review critical information at point of care.
- Built modern web interface using Angular framework, backend APIs using .NET Core, and implemented role-based access control to ensure appropriate data access for different healthcare staff levels.
- Collaborated with healthcare professionals, hospital administrators, and government officials to gather requirements, conduct user training, and ensure successful system adoption across 50+ healthcare facilities.

## TechLeadz

Lahore, Pakistan

WEB DEVELOPER

Nov. 2016 - May 2017

- Worked at a service-based software house delivering custom web applications for diverse clients across multiple industries and technology stacks.
- TravelLinked - Travel Agency Platform:** Developed multiple modules for a comprehensive travel agency management system built in Laravel framework.
- Implemented features for booking management, customer relationship management, itinerary planning, payment processing, and automated email notifications for travel confirmations.
- Gained exposure to diverse technology stacks including ColdFusion (legacy system maintenance), Laravel (modern PHP framework), and Angular (frontend development), working on various client projects simultaneously.
- Collaborated with project managers and clients to gather requirements, provide technical estimates, and deliver solutions within tight deadlines while maintaining code quality standards.
- Participated in code reviews, learned industry best practices for web development, and established foundation for full-stack development skills across multiple technologies.

## Education

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### NUST SEECS (School of Electrical Engineering and Computer Science)

Islamabad, Pakistan

MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

2017 - 2020

- CGPA: 3.5/4.0
- Specialization: Software Engineering and Distributed Systems
- Relevant Coursework: Advanced Software Engineering, Distributed Computing, Cloud Computing, Software Architecture and Design Patterns, Database Systems, Data Mining, Machine Learning
- Thesis/Capstone Project: Focused on advanced software development methodologies and distributed system architecture, exploring scalability patterns and microservices design principles
- Academic Activities: Participated in research seminars, technical workshops, and collaborative projects with industry partners

### NFC Institute of Engineering and Technology

Multan, Pakistan

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

2013 - 2017

- CGPA: 3.53/4.0 - Graduated with Distinction
- Core Coursework: Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Operating Systems, Computer Networks, Software Engineering, Web Technologies, Artificial Intelligence
- Final Year Project: Developed a comprehensive web-based application demonstrating full-stack development capabilities
- Academic Achievements: Consistent Dean's List recognition for academic excellence throughout the program

## AI-Powered Development & Modern Tooling

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**Early Adopter of AI-Assisted Development:** Actively leveraging cutting-edge AI tools and agents to enhance productivity, code quality, and development velocity. Extensive experience integrating AI-powered assistants into daily engineering workflows for code generation, refactoring, debugging, and architectural design.

## AI DEVELOPMENT TOOLS & AGENTS

- **Claude AI (Anthropic):** Extensively using Claude Code CLI and Claude.ai for complex code generation, system design discussions, code reviews, and technical problem-solving. Leveraging Claude's long context window for analyzing large codebases and architectural decision-making.
- **GitHub Copilot:** Integrated into daily development workflow for intelligent code completion, function generation, and test case creation. Utilizing Copilot Chat for inline code explanations and quick debugging assistance.
- **Cursor AI:** Using Cursor as an AI-first IDE for rapid prototyping, codebase navigation, and pair-programming with AI. Leveraging multi-file editing capabilities and AI-powered refactoring suggestions.
- **Custom AI Agents:** Experience building and deploying custom AI agents for specific engineering tasks including automated code review bots, documentation generation, and intelligent monitoring alert analysis.
- **AI-Assisted Architecture & Design:** Utilizing AI tools for system design brainstorming, evaluating architectural trade-offs, generating technical documentation, and creating comprehensive API specifications.
- **Prompt Engineering:** Developed expertise in crafting effective prompts for various AI models to maximize output quality and relevance for software engineering tasks.

**Impact on Development Workflow:** AI-assisted development has significantly improved code quality, reduced time spent on boilerplate code generation, accelerated debugging processes, and enabled faster exploration of new technologies and frameworks. Strong believer in augmenting human expertise with AI capabilities rather than replacing engineering judgment.

## Key Projects & Technical Contributions

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### SIDE PROJECTS & NOTABLE CONTRIBUTIONS

- **GunneboBGR - Airport Security Access Control System:** Developed a sophisticated desktop application deployed at Denver International Airport and other major airports for secure access control and identity verification.
- Implemented barcode scanning functionality to capture and verify credentials against external verification systems in real-time, ensuring only authorized personnel gain access to restricted areas.
- Integrated camera system with facial recognition capabilities using EmguCV (OpenCV.NET wrapper) to perform biometric verification, matching captured images against registered personnel database with high accuracy.
- Implemented ModBus protocol communication to interface with physical gate control systems, automatically opening gates upon successful verification and maintaining detailed access logs.
- Built using C# .NET with WPF for the desktop interface, ensuring reliable 24/7 operation in mission-critical airport security environments.
- **PingPong Lead Generation Platform:** Developed a comprehensive lead management system for a UK-based client specializing in loan origination and financial services.
- Created full-stack solution with Laravel backend providing RESTful APIs, Angular frontend for intuitive user interface, and MySQL database for robust data management.
- Implemented features for lead capture, qualification, scoring, assignment, tracking through sales pipeline, and automated follow-up workflows to maximize conversion rates.
- **AdeptTech Data Generator:** Built an intelligent data generation tool capable of producing massive datasets based on pattern analysis of initial seed data.
- Developed using Spring Boot backend for scalable data processing and Angular frontend for configuration and monitoring, enabling users to generate millions of realistic test records.
- Implemented sophisticated algorithms to analyze data patterns, relationships, and distributions in seed data, then generate statistically similar synthetic data while maintaining referential integrity.
- Designed for use in software testing, performance benchmarking, and development environments where large-scale realistic data is needed without exposing sensitive production data.
- **BLE AdHoc Network - Research POC:** Developed proof-of-concept implementation demonstrating feasibility of ad-hoc networking using Bluetooth Low Energy (BLE) technology.
- Created innovative solution for research paper showcasing how BLE-enabled devices can form mesh networks and relay information across multiple hops without traditional infrastructure.
- Optimized packet structure and communication protocols to maximize information transfer within BLE's limited packet size constraints, implementing efficient data compression and segmentation strategies.
- Demonstrated practical applications in scenarios where traditional networking infrastructure is unavailable or impractical, such as disaster recovery, remote sensing, or IoT deployments.

## Technical Strengths & Interests

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**Areas of Expertise:** Microservices architecture design and implementation, API development and integration, distributed system patterns, database optimization and scaling, cloud infrastructure (AWS), containerization and orchestration, payment systems and fintech solutions, real-time data processing, system observability and monitoring.

**Current Focus Areas:** Advanced Go programming patterns, event-driven architectures, Kubernetes ecosystem, distributed tracing, chaos engineering, performance optimization, and technical leadership.

**Professional Interests:** Passionate about building reliable, scalable systems that solve real-world problems. Strong advocate for engineering excellence, clean code practices, and knowledge sharing within engineering teams.