

# Bilal Ahmed

## Senior Engineering Leader – Payments, Security & SaaS

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**Open to:** Full-time remote roles from Pakistan (EOR or contractor). Open to relocation and employer-sponsored work authorization for the right long-term role · **Time zone:** UTC+5

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## Professional Summary

Senior Engineering Leader in **payments, security, and B2B SaaS platforms** with 20+ years of experience designing and delivering secure, scalable systems. Led **network tokenization, account updater, and high-volume payment data ingestion** at Pagos, handling millions of card-not-present transactions per month and improving approval rates by up to **7.5%** while cutting recurring declines by **~33%**.

Currently CEO & Co-Founder at **SYNVRA**, an early-stage, compliance-by-design **LIMS & validation automation** platform for regulated labs (21 CFR Part 11, ALCOA+, ISO 17025). Through **AegisPeak** (AI-driven cybersecurity) and **Aquilinesoft** (software & data studio), I have led cybersecurity and software consulting projects for enterprise and government organisations, including UNDP/GEF and Pakistan's Ministry of Climate Change. These founder studios are low-bandwidth, flexible ventures that have historically run alongside full-time roles; I am now actively seeking a primary **Senior Engineering Manager / Director of Engineering** position and can scale these ventures around it (nights/weekends or advisory only).

Blend of **hands-on architecture** (.NET, Python, AWS) with **distributed team leadership** across North America, Europe, the Middle East, and South Asia. Comfortable working directly with founders, product, risk, security, and compliance leaders to ship roadmap outcomes, not just features.

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## Core Skills

### Payments & Platforms

- Card-not-present flows and payment performance optimization
- Network tokenization (Visa VTS, Mastercard MDES/SCOF, Discover, Amex DDX)
- Account updater services (VAU, ABU/RTAU, Discover GAU, Amex Cardrefresher)
- Chargeback and dispute tooling (e.g., Verifi Order Insight)
- Subscription billing and recurring payments optimization
- 3DS and issuer/processor / PSP integrations

## Cloud & Data (AWS)

- Event-driven, cloud-native architectures on AWS
- Services: Lambda, ECS/Fargate, SQS/SNS, API Gateway, S3, RDS, Redshift, Kinesis, CloudWatch, Event Bridge, Step Functions
- High-volume and near real-time data pipelines and ETL
- Observability (metrics, logs, traces), SLOs and reliability engineering
- Cost-conscious scaling and resilience design

## Security, Compliance & Quality

- Architectures aligned with **PCI DSS** and **SOC 2**
- Secure logging and monitoring, alerting and incident response
- Encryption, key management and secrets handling
- SIEM/SOAR (including Wazuh) and security operations automation
- Exposure to regulated lab environments (21 CFR Part 11, ALCOA+, ISO 17025)
- Audit-ready documentation, evidence trails and validation artefacts

## Leadership & Startup Execution

- Building, leading and mentoring distributed engineering teams
  - Hiring, performance management and career growth frameworks
  - Roadmapping and prioritisation with Product, Data and business stakeholders
  - 0→1 product building as founder/CTO; customer discovery and iteration loops
  - Working directly with enterprise merchants, partners, regulators and government bodies
  - Communicating with executive stakeholders and boards
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## Professional Experience

### SYNVRA – Lahore, Pakistan

**CEO & Co-Founder** | Oct 2025 – Present

- Building **SYNVRA LIMS**, a compliance-by-design Laboratory Information Management System focused on regulated labs and GxP environments.
- Designing product and architecture so that **21 CFR Part 11, ALCOA+, ISO 17025, and CSA/CSV validation** are built-in from day one, not bolted on.
- Defining open APIs and integrations with ERP/LIMS/QA tools (e.g., SAP, Oracle, ELN/QMS) to support validation automation, evidence vaults and multi-tenant deployments on AWS.
- Establishing a product roadmap that prioritises regulatory alignment, instrument integration and validation acceleration for early pilot customers.
- Currently in early-stage design and customer validation; flexible on time commitment so I can fully focus on a primary full-time role.

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## Pagos Solutions, Inc. – Remote (US-based fintech)

**Senior Engineering Manager** | Jun 2023 – Oct 2025

**Technical Lead** | May 2021 – May 2023

- Improved card-not-present approval rates by **5–7.5%** by leading the rollout of a **PCI-compliant network tokenization platform** across Visa, Mastercard, Discover and Amex, including lifecycle management, fallbacks and performance tuning.
- Reduced **recurring payment declines** by **~33%** by designing and launching a unified **account updater service** (Visa VAU, Mastercard ABU/RTAU, Discover GAU, Amex Cardrefresher) for high-volume merchants on the Pagos platform.
- Delivered a **real-time payment data ingestion system** processing millions of transactions per month into AWS (S3, Lambda, Kinesis, Redshift) to power analytics, risk dashboards and merchant-facing products such as performance visualizations and anomaly detection.
- Enhanced chargeback outcomes via **Verifi Order Insight** integration and enriched issuer-side transaction data, giving merchants stronger evidence to reduce disputes and representment losses.
- Led distributed teams of backend, data and DevOps engineers across three continents; partnered with Product and Data to deliver roadmap items ~30% faster while maintaining reliability and compliance.
- Defined and implemented observability, alerting and incident response practices, including structured logging, tracing, on-call rotations and runbooks.
- Contributed to PCI/SOC2 audit readiness through secure coding practices, access controls, key rotation, change management and documentation.
- Operated in a fast-moving, remote-first global startup environment, delivering under tight timelines and high stakes in close partnership with Product, Data and founders.

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## Barbican LLC – Remote (US-based cybersecurity vendor)

**Senior Technical Lead (Contract)** | Mar 2020 – Apr 2021

- Led design and delivery of an **AI-powered SOAR platform** for enterprise cyber defence, integrating SIEM data, analytics and automated response.
  - Streamlined incident response workflows and playbooks to reduce dwell time and improve coordination across security operations teams.
  - Designed scalable cloud security architecture combining SIEM, advanced analytics and threat intelligence feeds, strengthening resilience against sophisticated attacks.
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## Securencrypt – Remote (US-based cybersecurity vendor)

**Technical Lead / Lead Software Architect / Senior Software Engineer (Contract) |**  
2011 – 2020

- Led architecture and development of endpoint protection and encryption products, with a strong focus on **ransomware defence** and secure data storage for enterprise customers.
  - Designed and evolved security orchestration and automation workflows, collaborating closely with product, compliance and operations teams.
  - Built high-performance security and encryption components in C/C++ and .NET, improving reliability and throughput for email, file and endpoint protection solutions.
  - Mentored engineers on design, code quality and incident response practices, raising the bar for maintainability and on-call readiness.
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## AegisPeak Private Limited – Lahore, Pakistan

**Founder & CTO – AI-Driven Cybersecurity |** May 2019 – Oct 2025 (part-time alongside full-time roles)

- Founded a cybersecurity venture focused on **AI-powered SIEM/SOAR** and ransomware defense for enterprise clients.
  - Designed **multi-tier security architectures** combining endpoint detection and response, log collection, correlation rules and automated playbooks.
  - Led development of prototypes for anomaly detection and prioritised incident response, integrating with existing SOC toolchains.
  - Co-authored patent documentation for an **AI-driven SOAR framework** that prioritises and automates incident response based on business impact.
  - Provided security architecture advisory services to clients in finance, telecom and SaaS.
  - From 2023 onward, AegisPeak operated primarily in a low-bandwidth advisory/experimentation mode while I focused on Pagos and SYNRA.
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## Aquilinesoft – Lahore, Pakistan

**Founder & CEO / CTO – Software & Data Studio |** Nov 2004 – Oct 2025 (boutique studio, part-time)

- Ran a boutique software engineering and consulting practice serving clients in North America, Europe, the Middle East and Pakistan.
- Delivered cloud-integrated applications and data platforms across sectors including environment, payments, education and enterprise software.
- Led small, senior-heavy teams and often acted as both architect and engagement manager, translating client needs into scalable solutions.

## Selected Project – UNDP / GEF – Islamabad, Pakistan

**System Architect (Contractor – individual engagement)** | Aug 2020 – Dec 2020

- Designed the end-to-end architecture, database schema and SRS for an **Environmental Information Management System (EIMS)** for Pakistan's Ministry of Climate Change, funded by UNDP/GEF.
  - Captured functional and non-functional requirements, defined data models and produced documentation for multi-stakeholder usage (academia, government authorities, researchers).
  - Built data import/export modules to ingest datasets from multiple government bodies and delivered role-based dashboards to support evidence-based environmental decision-making.
  - Planned deployment and security architecture to ensure data integrity, controlled access and long-term maintainability.
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## Earlier Experience

### Freelance Software Engineer – Various Clients

**Software Engineer / Consultant** | 2003 – 2011

- Developed security-focused Windows utilities, network/messaging tools and COM/ActiveX components for international clients and local ISP users.
- Designed and maintained Windows desktop and server applications in C/C++ and .NET with SQL Server backends, optimised for low-spec hardware and limited connectivity (ISPs and small business customers).
- Acted as a trusted long-term partner for several small and medium businesses needing high-reliability desktop and server software.

### Premium Telecom – Lahore, Pakistan

**Software Engineer** | 2002 – 2003

- Worked on telecom software systems including network monitoring, billing and customer-facing applications.
  - Contributed to performance optimisation, troubleshooting and feature delivery in a mixed Windows and Linux environment.
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## Education

**Executive MBA – Quantic School of Business and Technology (Washington, DC – online)** | In progress (~55% complete)

- Concentrations completed: **Business Foundations, Accounting, Markets & Economies, Finance, Leading Organizations.**

- In progress / upcoming: **Strategy, Data & Decisions** and remaining advanced concentrations.

**MS, Computer Science – Hamdard University, Karachi, Pakistan | 2002**

- Dean's Honor List · CGPA: 3.64 / 4.0

**BSc, Mathematics (A & B) and Physics – University of the Punjab, Lahore, Pakistan | 1999**

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## Certifications, Training & Affiliations

- PMP Exam Prep (35 Contact Hours) – PMI Lahore Chapter, 2024
  - Wazuh Training Course for Security Engineers – Wazuh.com, 2020
  - Secure Coding & Security Awareness Training – Thoropass (various courses, 2023–2024)
  - Member, Project Management Institute (PMI) – Membership ID 4773666
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## Languages

- **English:** Fluent
- **Urdu:** Native