

RAHUL KARN

Senior .NET Engineer · InsurTech & Financial Systems
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4+ hrs/day US Eastern overlap | Open to Senior Remote Engineering Roles

PROFILE

Senior .NET engineer with 8+ years building production insurance and financial systems at one of Nepal's largest life insurers, including a platform serving 90,000+ users, a premium calculation engine across 20+ product lines, and payment architecture handling NPR 100B+ in transaction volume. Combining hands-on engineering with formal training in data science (MSc, Coventry) and finance (MBA), bringing analytical and business depth uncommon in core engineering roles.

EXPERIENCE

Senior .NET Developer / Tech Lead | Nepal Life Insurance Co., Kathmandu Jan 2023 – Present

- Lead developer for the company's core insurance platform (policy administration, underwriting, claims, and digital channels), serving 90,000+ active users.
- Shipped enterprise portal and API ecosystem with RBAC, OAuth2/OIDC authentication, and OWASP-aligned security controls.
- Drove database performance program: ~50% reduction in query latency across Oracle and SQL Server through indexing, execution-plan analysis, and stored-procedure refactoring.
- Designed payment gateway integration with idempotency keys, automated reconciliation, and audit logging; zero duplicate transactions on NPR 100B+ volume.
- Owned technical design reviews and authored RFCs covering data models, API contracts, and migration strategy for new modules.
- Established code review standards, Git Flow branching, and CI/CD pipelines; reduced release cycle from monthly to bi-weekly.
- Coordinated 6+ engineers through phased modernization (monolith to modular); mentored junior and mid-level developers on .NET Core, async patterns, EF Core performance, and clean architecture.
- Implemented observability stack (structured logging, health checks, performance counters) enabling sub-hour incident detection on production workloads.
- Researching applied AI/ML for insurance use cases: fraud detection, claims triage, and predictive underwriting.

Software Engineer | Nepal Life Insurance Co., Kathmandu Nov 2018 – Dec 2022

- Built premium calculator engine across 20+ life insurance product lines; standardized actuarial rules, improving sales workflow efficiency by ~30%.
- Developed asset management application handling NPR 100B+ portfolio with audit controls and regulatory reporting.
- Built secure onboarding system for 5,000+ agents and customers with KYC workflows, eligibility validation, and payment gateway integration.
- Built API integrations connecting underwriting, policy issuance, and claims across core insurance systems.
- Developed scheduled batch jobs for premium notices, policy renewals, and commission calculations, processing 100K+ records per cycle.
- Migrated legacy ASP.NET WebForms modules to ASP.NET MVC / Web API, improving maintainability and front-end responsiveness.

Software Engineer | Innovative Ghar Nepal, Kathmandu Oct 2017 – Nov 2018

- Built multi-tenant real estate platform (ASP.NET MVC, C#) with listings, tenant management, RBAC, and reporting modules.
- Designed normalized SQL Server schema and stored procedures backing search, filtering, and tenant isolation.

TECHNICAL SKILLS

Languages & Frameworks: C#, .NET 8/Core, ASP.NET Core, Entity Framework Core, Web API, MediatR; Python (pandas, scikit-learn)

Databases: Oracle, SQL Server, T-SQL; query optimization, execution plans, indexing strategies

Architecture & APIs: REST API design, repository/service patterns, domain-driven design, OAuth2/OIDC, event-driven workflows

Data & AI/ML: Python data stack, ML.NET, Semantic Kernel; applied to insurance use cases

Cloud & DevOps: Azure (App Services, SQL, Key Vault), Docker, Git, CI/CD basics

Insurance Domain: Policy admin, underwriting, claims, premium calculation, KYC/AML, payment reconciliation, agent/distribution

EDUCATION

MSc, Data Science & Computational Intelligence, Coventry University, UK (Distance, Softwarica) Expected Feb 2027

MBA, Finance, Indira Gandhi National Open University Expected Sept 2026

BE, Computer Science & Engineering, Advanced College of Engineering, Tribhuvan University 2013 – 2017

CERTIFICATIONS & PUBLICATIONS

Microsoft Certified: Azure Solutions Architect Expert (AZ-305) (In Progress)

IEEE Publication: "Attendance and Security Assurance using Image Processing," ICCMC 2018, IEEE Xplore