

Senior Full-Stack Software Engineer (C#/.NET + TypeScript/Aurelia)

Location: Stellenbosch / Cape Town, South Africa — **Hybrid** (mostly remote; ability to travel to Stellenbosch when required)

Join <u>Callbi</u> — South Africa's top-performing, rapidly scaling interaction analytics platform. We help enterprises turn conversations into insight using best-in-class engineering, strong security, and increasingly, practical Al. We move quickly **without cutting corners**, and we're looking for a senior engineer who thrives in that blend of pace, rigour, and ownership.

The Opportunity

You'll own end-to-end delivery across a modern, multi-region SaaS stack: designing and building .NET Core services, shaping robust data models for both OLTP and OLAP, and shipping polished front-end experiences in TypeScript. You'll work with AWS at scale (ECS/serverless/SQS), apply secure engineering practices from day one, and help us securely leverage LLMs where they deliver real customer value. Our primary front-end is **Aurelia** for its clean binding, use of web standards and convention-over-configuration model; strong React/Angular engineers ramp up quickly.

What You'll Do

- Design and build resilient **ASP.NET Core** REST APIs with **OpenAPI/Swagger** that are a pleasure to consume.
- Model and optimise relational schemas for OLTP workloads and design/shape data for OLAP and analytics use-cases.
- Build product features end-to-end across **TypeScript + Aurelia** (our primary FE; React/Angular experience transfers well) and .NET services.
- Architect, implement, and operate workloads on AWS (ECS Fargate, Lambda, API Gateway/ALB, SQS/SNS/EventBridge, S3, RDS/Aurora, IAM, VPC, CloudWatch) using AWS Well-Architected principles.
- Contribute to containerisation and orchestration (**Docker**, **Kubernetes**), with a bias for maintainability and observability.
- Implement secure authentication and authorisation patterns (OIDC/OAuth2), and champion secure coding and **OWASP Top 10** remediation.
- Instrument services with tracing/metrics/logging (OpenTelemetry/Grafana/CloudWatch), and drive performance improvements.
- Automate everything: CI/CD, infrastructure-as-code (preferably AWS CDK in C#), testing, quality gates.
- Collaborate closely with product/design, run thoughtful code reviews, and shepherd features from idea to production.
- Explore and apply LLMs and practical ML where they unlock real user value and operational leverage.

Our Tech (you don't need all, but strong overlap is expected)

- Back-end: C#/.NET 8+, ASP.NET Core, OpenAPI, EF Core
- Data: Strong SQL; modelling for OLTP & OLAP; caching/queuing patterns
- Cloud & Infra: AWS (ECS Fargate, Lambda, SQS/SNS/EventBridge, S3, RDS/Aurora, CloudFront, API Gateway/ALB, IAM, KMS, etc), IaC (AWS CDK C# preferred), Docker, Kubernetes (EKS exposure a plus)
- Front-end: TypeScript, Aurelia (primary); React/Angular welcome; modern tooling, testing libraries
- **Security & Observability:** OIDC/OAuth2, OWASP Top 10, OpenTelemetry, Prometheus/Grafana, CloudWatch
- **Al/LLMs** (**nice to have**): Bedrock/OpenAl/Anthropic/Alphabet/Meta, embeddings/vector search, prompt/response shaping, safety/quardrails

What You'll Bring

Must-haves

- 5+ years building production software, including ownership of significant backend services and customer-facing front-ends.
- Deep .NET Core experience; strong API design instincts; comfort with OpenAPI tooling.
- Expert SQL (query tuning, indexing, schema design) for OLTP and OLAP contexts.
- Real experience running on AWS at scale (serverless and containerised), and applying Well-Architected practices.
- Hands-on Kubernetes knowledge (you've deployed, debugged, and operated workloads).
- Production experience in **TypeScript** plus a modern FE framework; **Aurelia** ideal (React/Angular transfer well).

- Demonstrable secure coding habits; able to identify, prevent, and remediate OWASP
 Top 10 issues.
- Clear communication, product empathy, and a bias to action you're a self-starter who ships.

Nice to haves

- OIDC/OAuth2 expertise (Auth code + PKCE, token lifecycles, scopes/claims, etc).
- Experience with event-driven architectures (e.g., Kafka/Redpanda) and analytics pipelines.
- Practical use of **LLMs** in production workflows or developer tooling.
- Multi-tenant SaaS patterns, privacy-by-design, and familiarity with **POPIA/GDPR**.

What Success Looks Like (first 90 days)

- Ship a meaningful feature across API + UI with solid tests, telemetry, and docs.
- Improve the performance of a high-traffic query or service by an order of magnitude you can demonstrate.
- Challenge yourself to close a security gap, harden an auth flow or suggest a better way
- Propose and land a pragmatic LLM-assisted improvement (dev-workflow or product), with safety guardrails.

How We Work

- Hybrid: primarily remote; on-site collaboration in Stellenbosch as needed.
- Autonomy with accountability: small, sharp team; high trust; strong engineering standards.
- Quality at speed: we move fast and maintain the bar through testing, reviews, and observability.

Compensation & Benefits

Competitive salary, meaningful impact, modern equipment, and budget for development. We value outcomes, growth, and craftsmanship.

Includes Retirement Annuity

Hiring Process (what to expect)

- 1. Intro mutual fit, context.
- 2. Practical exercise A short take-home assignment.
- 3. Technical deep dive Technical discussion.

Apply: Send your CV/LinkedIn/GitHub and a note on a system you're proud of to **hr@callbi.io** with subject "Senior Full-Stack Engineer — Stellenbosch/Cape Town". If you meet most of the requirements but not all, we'd still love to hear from you.