

Rajnish Noonia

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Lead Architect | Full Stack Engineer

Software Architect and hands-on **Full-Stack Engineer** with **24+ years** of commercial experience, combining architecture leadership with deep engineering expertise across **React, TypeScript, C# / .NET, distributed systems, event-driven architecture, cloud-native platforms** and **real-time applications**. Owns architecture end to end - from event-driven backends and distributed services through to the front-end frameworks, SDKs and design systems that consume them - and stays in the codebase alongside the teams building on it.

Sets the technical direction, engineering standards and platform foundations that other teams build upon. Architected the **enterprise application platforms, developer SDKs** and framework infrastructure powering **trading, risk** and **operations** products delivered into **Millennium Management, NatWest Markets, ISDA, BMO, EDF Trading** and **Gazprom Marketing & Trading** - platforms adopted across multiple teams and business-critical applications spanning hedge funds, capital markets, energy trading, healthcare and retail.

Equally at home on **greenfield builds** and **complex existing estates** - defining the architecture and engineering standards, governing quality, mentoring engineers and building alongside the teams that ship. Has repeatedly led **technology modernisation** across successive generations - desktop to web, monolith to microservices, on-premises to cloud-native - most recently establishing **AI-native engineering practice** on live production codebases.

CORE COMPETENCIES

- **Front-End Engineering:** React 18 (Hooks, Context API, Redux Toolkit), TypeScript, RxJS, Angular, MVVM, WPF, Blazor, HTML5, CSS3 / SCSS, CSS design tokens, Vite, Nx, Lerna, Web Workers and modern UI development.
- **Backend & .NET Engineering:** C#, .NET 8, ASP.NET Core, Web APIs, GraphQL, Node.js, Entity Framework, LINQ, Rx.NET, TPL Dataflow and asynchronous programming.
- **Distributed & Real-Time Systems:** Microservices, event-driven architecture, RxJS and Rx reactive streams, Kafka, RabbitMQ, Azure Service Bus, WebSockets, SignalR, Protobuf, MessagePack, low-latency and highly available systems.
- **Architecture & Platform Engineering:** Enterprise and solution architecture, domain-driven design, enterprise UI platforms, developer SDKs, reusable frameworks, micro-frontends, shared services, design systems, API design, performance engineering, SaaS delivery, application scaffolding and technology modernization.
- **Financial Desktop Platforms:** OpenFin, Glue42, Interop.io, FDC3, workspace integration, workflow automation and cross-application communication.
- **Trading & Financial Technology:** Front office, middle office, pre- and post-trade workflows, Fixed Income, Bonds, Repo, Equities, Equity Derivatives, FX Options, Futures, NDF, Swaps, Rates, Allocations, Compliance, market data, P&L and risk & operations platforms.
- **Desktop & Hybrid Applications:** WPF, Prism, MVVM, Blazor, Excel-DNA, ClickOnce, Win32 interop and hybrid web / desktop delivery.
- **Data & Analytics Platforms:** Market data, real-time data visualisation, data virtualisation, geospatial mapping and operational dashboards; AG Grid, Syncfusion, Kendo UI, Highcharts, MapLibre GL JS and Dockview.
- **Cloud, Data & Delivery:** AWS, Azure, Docker, Kubernetes, Helm, ArgoCD, Terraform, GitHub Actions, Azure DevOps, CI/CD, SQL Server, Azure functions, PostgreSQL, Oracle, MongoDB, Redis, DuckDB and Elasticsearch.
- **Quality & Test Engineering:** Vitest, Jest, Playwright, Cypress, Storybook, NUnit, xUnit, SpecFlow, component and visual regression testing, UI automation, TDD, BDD and DDD.
- **AI-Native Engineering:** AI-assisted development, LLM context engineering, multi-agent development workflows, Claude Code, Cursor and AI-enabled developer platforms.
- **Technical Leadership:** Architecture governance, technical strategy, engineering leadership, roadmaps, mentoring, code reviews, quality engineering and agile delivery.
- **Industry Expertise:** Hedge funds, capital markets, commodities and energy trading, healthcare, retail and e-commerce.

EXPERIENCE

Lead Architect / Developer

Oct 2025 – Present

Kinetix Trading Solutions | Engagement: a global multi-strategy hedge fund

Lead Architect responsible for designing and delivering an enterprise application platform and SDK for trading, risk and operations teams. Ownership spans architecture, framework engineering, hands-on React, TypeScript and service development, developer experience and technical standards, enabling multiple teams to rapidly deliver business applications.

Key Achievements

- Designed and delivered an enterprise UI platform providing reusable data grids, geospatial visualisation, charting, docking workspaces and workflow components through metadata-driven abstractions, significantly reducing development effort across all consuming teams.
- Engineered RxJS-based reactive data pipelines for live market and operational data - multicast subjects, backpressure handling, throttling, windowing and conflation - delivering high-frequency updates into virtualised data grids without UI degradation.
- Architected a framework-agnostic SDK with a zero-dependency core, enabling business logic, services and application workflows to be reused across React, Angular, mobile and server-side environments.
- Established a real-time streaming architecture supporting live data distribution over WebSockets, claims-based authorisation, user-targeted messaging and horizontally scalable Kubernetes deployments.
- Optimised application performance for high-frequency data environments through virtualised rendering, memoisation, selective re-render strategies, Web Worker offloading and bundle-level code splitting.
- Established a unified enterprise design system and component architecture, developed and documented in Storybook, ensuring consistent user experience, branding and behaviour across multiple applications and third-party technology stacks.
- Embedded quality engineering with Vitest unit and component testing, Playwright end-to-end automation and visual regression coverage, establishing consistent test standards across the platform.
- Developed a CLI-based application scaffolding framework generating production-ready React and Angular solutions with pre-configured authentication, containerisation, CI/CD pipelines, Kubernetes deployment assets and AI-development context.
- Pioneered an AI-native developer platform incorporating structured context management and package-level documentation, enabling AI-assisted development tools such as Claude Code and Cursor to generate framework-compliant solutions with minimal onboarding.
- Introduced a multi-agent software engineering model using role-based AI agents, persistent context and controlled handoff workflows operating alongside developers on active production codebases.
- Delivered business-critical applications across trading, risk and operations, together with a desktop interoperability platform and a shared UI core framework used to build React and Angular applications.
- Provided technical leadership and mentoring across the engineering team, owning coding standards, code review practice and architectural governance.

Technology Stack: React 18, TypeScript, RxJS, Redux Toolkit, Context API, MVVM, Angular, NgRx, AG Grid, Highcharts, MapLibre GL JS, Dockview, Ant Design, NG-ZORRO, WebSockets, Socket.IO, Vite, Nx, SCSS, CSS Design Tokens, HTML5, Storybook, Vitest, Jest, Playwright, JWT, Docker, Kubernetes, ArgoCD, AWS, GitHub Actions, Claude Code, Cursor, Multi-Agent AI, LLM Context Engineering.

Lead Architect / Developer

Mar 2020 – Sep 2025

Kinetix Trading Solutions | Engagements: a financial industry body, an interdealer broker and a North American investment bank

Architect and technical lead for the Kinetix enterprise application platform, delivering a production-grade React / TypeScript UI framework, .NET service layer and reusable SDK powering trading, risk and operational applications across multiple asset classes including Bonds, Repo, Equities, Equity Derivatives, FX Options, Futures, NDF, Swaps,

Rates, Allocations and Compliance, spanning pre- and post-trade workflows and SaaS delivery. Responsible for platform architecture, interoperability, developer tooling, cloud integration and engineering standards across web and desktop ecosystems.

Key Achievements

- Architected and delivered a production-grade React / TypeScript MVVM framework providing application lifecycle management, dependency injection, plugin architecture, SDK distribution and desktop interoperability across OpenFin and Interop.io environments.
- Designed and built C# / .NET 8 and Blazor services, defining API contracts and integration standards for cloud-native .NET and Java microservices leveraging Kafka, RabbitMQ and Elasticsearch to support scalable real-time business services.
- Designed a loosely coupled micro-frontend architecture with RxJS event-driven communication, runtime service composition, permission-based feature delivery and application-scoped event aggregation.
- Built reactive business rules, command processing, a forms framework and real-time streaming capabilities on RxJS observable streams, supporting high-volume trading workflows.
- Delivered enterprise-grade data virtualisation and metadata-driven configuration enabling high-volume trading blotters to render and update in real time without client-side degradation.
- Integrated OpenFin, Interop.io and FDC3 interoperability standards, enabling workflow orchestration, desktop integration and seamless context-sharing across heterogeneous application landscapes.
- Designed a platform-engineering approach that enabled multiple teams to rapidly deliver business applications through reusable frameworks, shared services, developer SDKs and common user experience patterns.
- Early adopter of AI-enabled user experiences, integrating voice-driven workflows, conversational interfaces and intent-based automation within a real-time event-driven architecture.
- Established engineering governance including CI/CD pipelines, automated testing, Playwright and Cypress frameworks, TDD / BDD practices, code reviews and mentoring across distributed engineering teams.

Technology Stack: React, TypeScript, RxJS, MVVM, C#, .NET 8, Blazor, Node.js, GraphQL, OpenFin, Interop.io, FDC3, AG Grid, Kendo UI, ProseMirror, WebSockets, Web Workers, Kafka, RabbitMQ, Elasticsearch, PostgreSQL, SQL Server, MongoDB, Docker, Kubernetes, AWS, Azure, Playwright, Cypress, Jest, Azure DevOps, CI/CD, TDD, BDD, Agile.

Senior Consultant

Jun 2017 – Feb 2020

Kinetix Trading Solutions | Engagement: a Tier-1 investment bank

Responsible for architecture and development of client applications, core framework components and backend services for a greenfield, high-availability, low-latency multi-asset trading platform used by major financial institutions across the UK and US markets.

Key Achievements

- Developed core platform capabilities enabling development teams to rapidly deliver Repo and Bond trading functionality across desktop and web applications.
- Built reactive data and event-handling layers using Reactive Extensions (Rx) and event aggregation, delivering low-latency market data and order-state updates into trading blotters.
- Designed and delivered enterprise-grade data virtualisation, configuration, command and forms frameworks used across multiple trading applications.
- Architected a loosely coupled, SDK-based application model enabling modular development, extensibility and simplified client integration.
- Defined API specifications and integration patterns between client applications and Java-based backend microservices.
- Established automated testing, CI/CD pipelines, UI automation frameworks and engineering governance practices.
- Provided technical leadership, mentoring and architectural guidance across multiple delivery teams.

Technology Stack: C# 6.0, WPF, MVVM, React, TypeScript, Reactive Extensions (Rx), microservices, LINQ, WebSockets, Autofac, TPL Dataflow, Multithreading, Docker, Kubernetes, AWS, Azure, CI/CD, TDD, BDD, SpecFlow, SQL Server, Oracle, Agile.

VARIOUS PROJECTS (2002 – 2017)

Full-Stack Developer | EDF Trading

Feb 2016 – Apr 2017

Delivered full-stack solutions across web, desktop, server and Excel-based applications - Angular front ends, WPF desktop applications, .NET backend services and Excel-DNA integrations - with real-time SignalR data visualisation, shared frameworks and enterprise NuGet packages adopted across teams, plus CI/CD pipelines via TFS Release Management. Technologies: C#, .NET 4.6, Angular, TypeScript, WPF, MVVM, Web API, Rx, SignalR, Azure Service Bus, SQL Server, Excel-DNA, TDD / BDD.

Senior .NET Consultant | Graphnet Health

Sep 2014 – Dec 2015

Architected a real-time monitoring and diagnostics platform processing high-volume service-bus messages with live data-flow visualisation, and a graphical workflow integration platform enabling product teams to transform heterogeneous data and publish it through REST APIs. Technologies: C#, .NET 4.5, WPF, Prism, MVVM, Rx, AngularJS, TypeScript, Web API, SignalR, NServiceBus, TPL Dataflow, RavenDB.

Senior .NET Developer | Gazprom Marketing & Trading

Apr 2014 – Aug 2014

Delivered architecture and reusable framework components for Power and Gas storage trading across UK and European markets, integrating OpenLink Endur (CTRM), Excel-based workflows and internal enterprise services. Technologies: C#, .NET, WPF, MVVM, Prism, Rx, Web API, SignalR, RabbitMQ.

Senior .NET Consultant | DRS (Data Research and Services)

May 2013 – Apr 2014

Built reusable MVVM, navigation, persistence and localisation frameworks for a global e-marking product suite, together with high-performance controls and early HTML5 / Angular SPA proof-of-concepts shaping future product direction. Technologies: C#, WPF, MVVM, Prism, MEF, Rx, ASP.NET MVC, AngularJS, HTML5, Web API, NUnit.

Senior WPF Developer | UST Global

Oct 2012 – Apr 2013

For a healthcare software provider, delivered reusable APIs, framework components, desktop personalisation capabilities and support tooling adopted across multiple healthcare products by development, QA and operations teams. Technologies: C#, WPF, MVVM, Prism, Castle Windsor, WCF, Win32, SQL Server, DevExpress, NUnit.

Technical Architect | Steria / Xansa

Aug 2004 – Sep 2012

For a major UK retail and healthcare group, architected large-scale healthcare and retail platforms including clinical workflow systems and operational dashboards, built reusable WPF and web frameworks adopted across projects, and led delivery teams and major transformation initiatives. Technologies: C#, ASP.NET MVC, WPF, Prism, Silverlight, WCF, SQL Server, Oracle, MongoDB, NServiceBus, Entity Framework.

Developer | Mindmill Software Ltd

Jun 2002 – Jul 2004

Delivered banking, insurance, aviation and public-sector solutions for international clients, including flight operations information system functionality, flight data processing components and biometric attendance systems. Technologies: ASP.NET, JavaScript, HTML / CSS, SQL Server, MySQL, XML / XSLT, VB6, VC++, COM.

EDUCATION & ADDITIONAL INFORMATION

Education

- Master of Information Technology (MIT Computers) and Bachelor of Science (Electronics).

Additional Information

- British Citizen, based in London, UK. Author of 100+ technical articles and open-source contributor.
- Interests: Technology R&D, Electronics and Circuit Design.