

ANOOP RAJ NAIR

Principal Software Engineer, Vice President · Wellington Management · Boston, MA

<https://anooprajnair.com/> · <https://www.linkedin.com/in/anooprajnair/>

EXECUTIVE SUMMARY

Investment technology leader with 25+ years of experience architecting and delivering mission-critical platforms across asset management, energy trading, and capital markets. At Wellington Management for nearly two decades — first as an embedded Sapient consultant (2006–2013), then as a full-time Principal Engineer — I have built firm-wide systems spanning portfolio analytics, structured products, ESG computation, real-time data infrastructure, and next-generation investment platforms. Proven track record delivering complex, high-stakes programs under regulatory and commercial constraints, managing cross-geography teams, and translating quantitative investment frameworks into production-grade technology. Currently leading the Alpine Data Engine (real-time hedge fund analytics) and an AI-assisted redesign of Wellington's core portfolio analytics library using Claude Code CLI.

CORE COMPETENCIES

- Investment Technology Architecture
- Portfolio Analytics & Attribution
- Real-Time Data Systems
- Fixed Income & Structured Products
- ESG Analytics Platforms
- AWS / Cloud Architecture
- Team Leadership & Offshore Delivery
- Stakeholder & Client Management
- AI-Assisted Engineering (LLM Tooling)

TECHNICAL SKILLS

Languages	Java, SQL/PL-SQL, Perl, JavaScript/TypeScript, Python
Cloud & Data	AWS (EC2, Lambda, S3, Redshift, EMR, Athena), Hadoop HDFS, Apache Spark, Apache Hive, Elastic Search
Frameworks	GraphQL, React JS, Node.js, OpenFin, Socket.io, Redis, Grid Computing
Data & Analytics	Bloomberg B-PIPE, Intex API, Oracle, Investment View Library, TIBCO
Tools & Platforms	Claude Code CLI, IBM Tivoli Maestro, Tableau, Crystal Reports, In3D Visual Insight
Databases	Oracle 9i/11g, Amazon Redshift, DynamoDB, Sybase

PROFESSIONAL EXPERIENCE

Wellington Management Company LLP January 2013 – Present

Principal Software Engineer, Vice President · Boston, MA

Investment View Library — AI-Assisted Architectural Redesign

Core Investment Technology · 2026 – Present

- Leading the architectural redesign of the Investment View library — Wellington's core portfolio analytics engine underpinning virtually all investment platforms — using Claude Code CLI (Anthropic's agentic coding tool) to accelerate the rewrite
- Redesigning for both end-of-day batch and high-throughput, tick-driven real-time demands; establishing an early institutional pattern for AI-assisted engineering on production-grade financial systems at Wellington

Alpine Data Engine — Real-Time Investment Analytics Platform

Hedge Fund / Alternatives Desk · 2023 – Present

Technical Architecture

- Architected the Alpine Data Engine — real-time data and computation layer powering Wellington's first hedge fund investment analytics platform, delivering live ticking positions, Bloomberg B-PIPE pricing, intraday P&L, and portfolio and risk analytics
- Designed the end-to-end real-time pipeline: live position ingestion → Bloomberg B-PIPE price feed → P&L via valuation engine → portfolio analytics via upgraded Investment View library → risk engine integration
- Led a significant upgrade of the Investment View library to support continuous tick-driven computation — extending a historically batch-oriented engine to hedge fund scale and throughput
- Integrated with Wellington's proprietary XML-defined aggregation engine to roll up position-level analytics into configurable buckets in real time; exposed all output through the PRISM GraphQL layer with role-based authentication

Team Leadership

- Leading a team of 4 engineers — responsible for technical direction, architecture decisions, delivery planning, sprint execution, and stakeholder alignment with the Hedge Fund desk and platform teams

ESG Analytics Microservice

Firm-Wide · ESG / Sustainable Investing · 2021 – 2022

- Identified firm-wide duplication risk as multiple teams independently implemented ESG calculations; designed a centralized ESG Analytics microservice as the single authoritative computation layer for portfolio-level ESG analytics across all investment tools
- Wellington was a founding signatory of the Net Zero Asset Managers initiative; consolidated complex, rapidly evolving ESG logic into one governed service consumed firm-wide, ensuring consistent and auditable analytics across all portfolios
- Drove cross-team integration, testing, and cutover across multiple applications simultaneously; scaled the platform to handle firm-wide portfolio-level computation volume

PRISM — Firm-Wide GraphQL Data Layer

Firm-Wide Investment Technology Platform · 2021

- Led the exposure of Wellington's Portfolio Position, Analytics, and Aggregation data through PRISM — the firm's GraphQL data layer aggregating all data producers, databases, and microservices into a single canonical API surface
- Integrated with the Investment View library to expose end-of-day holdings, pricing, and computed portfolio analytics; designed data contracts, schema definitions, and access patterns for consumers across the firm

Mosaic — Next-Generation Investment Technology Platform

Firm-Wide · Fixed Income · Cross-Asset · 2019 – 2020

- Led the engineering build-out of Mosaic — Wellington's firm-wide OpenFin-based investment desktop platform on a microservices architecture; worked with consulting partners to establish architecture standards and standardize UI design language across the firm
- Led migration of Investor LaunchPad products (six Fixed Income desks) into the unified Mosaic Research Platform; built the Open Search infrastructure on Elastic Search, enabling firm-wide research discovery across securities, analysts, and asset classes for the first time
- Managed a multi-geography engineering team following Agile principles; drove decommissioning of legacy applications in close cooperation with business teams

ARIA — Analyst Research Impact and Accuracy

Investment Grade · High Yield Fixed Income · 2017 – 2018

Platform & Quantitative Framework

- Architected and delivered ARIA — a specialized performance attribution platform quantifying the research skill of Fixed Income credit analysts across IG and HY desks; no industry-standard solution existed for this problem at the time
- Partnered directly with Wellington's Chief Fixed Income Strategist to translate complex quantitative evaluation models (DTS-based exposure normalization, RUDTS accuracy scoring, benchmark-relative alignment) into production engineering specifications
- Implemented attribution engine decomposing portfolio alpha into aligned, misaligned, and uncovered contributions; built linked multi-period attribution with market-value weighted aggregation and smoothing across hundreds of accounts

Data Engineering

- Designed a large-scale data pipeline on AWS and Hadoop sourcing from six internal systems; orchestrated daily batch via IBM Tivoli Maestro; built EMR/HDFS assimilation layer with Spark/Hive computation; surfaced results in Amazon Athena and Tableau for senior management
- Replaced manual spreadsheet-based analyst evaluation with a systematic, daily, firm-wide attribution system — enabling Fixed Income Senior Management to objectively measure credit analyst skill across recommendation categories for the first time at Wellington

Investor LaunchPad (ILP) — Fixed Income Expansion

Investment Grade · High Yield · EM Corporate · EM Sovereign · Municipal · Insurance/BL · 2016

- Extended Investor LaunchPad — Wellington's existing firm-wide research and collaboration platform (originally Equity-only) to cover the full Fixed Income universe; onboarded six Fixed Income desks serving ~1,000 active users firm-wide
- Designed Fixed Income-specific data models and integrations for securities, analytics, and research workflows; made Wellington's internal Fixed Income research accessible and searchable to all investors for the first time

Target Capture Platform

US Multi-Strategy · Emerging Market Debt · Global Bond · 2014 – 2015

- Architected and owned Target Capture — replacing manual spreadsheet-based PM workflows with a centralized platform supporting active weight target management across sectors and securities in multiple sizing terms: MV%, CTD, CTSD, CTDTS, and CTIActiveRisk
- Deployed across three desks managing ~\$1B in notional; built integrated trade generation, performance attribution, and risk analytics; connected to downstream compliance and portfolio management systems for daily automated rebalancing

Rapid Solutions Team — Fixed Income Portal & Bank Loan Workflow

Currency · Bank Loans · Multi-Boutique Fixed Income · 2013

- Led a combined team of engineers and business analysts on Wellington's Rapid Solutions team — purpose-built to deliver investor tools outside traditional development cycles, with direct PM/PA access and weekly production releases
- Delivered Bank Loan legal document workflow system, Currency Order Workstation, TBA Roll System, Asset In-Kind Transfer System, Credit Research System, and multiple data feeds — all through a central role-based web portal

Sapient Corporation · Client: Wellington Management 2006 – January 2013

Embedded Technology Consultant · Boston, MA

Structured Products Platform & Federal Reserve Mandate Technology

Structured Products — RMBS · CMBS · ABS · CLO · 2008 – 2012

- Following the 2008 housing market crash, Wellington was selected to manage a large Federal Reserve mandate; embedded directly with the Structured Products desk to design and deliver production technology across RMBS, CMBS, ABS, and CLO asset classes under significant regulatory pressure

- Designed and built the Structured Products Datamart, sourcing large-scale datasets from Intex; architected the Structured Product Analyzer (SPA) — a real-time cashflow scenario analysis tool integrating with Intex Solver API and Grid Computing for near-real-time results at scale
- Built a dedicated Fed data feed and regulatory reporting tool meeting stringent data quality, format, and audit standards required under the mandate; coordinated with compliance and operations for timely, audit-ready submissions

Investment Strategy Workbench (ISW)

Global Bond Desk · 2006 – 2007

- Architected and owned ISW — a performance attribution platform for Wellington's Global Bond desk, measuring contribution to return for abstract investment strategies across international sovereign bond markets, including German Bunds and UK Gilts
- Bridged the gap between theoretical strategy construction and realized P&L, giving PMs a systematic daily view of how yield curve ideas translated into performance across market-value and CTD-sized positions

Sapient Corporation August 2000 – 2006

Track Lead · Infrastructure Lead · System Architect · Multiple client locations

Cinergy Corporation — REAP Risk Engine & Portfolio Optimization Platform

Energy Trading · Power · Gas · Coal · Propane · Emissions · March 2003 – February 2006

Cincinnati, OH · Houston, TX · Bangalore, IN · New Delhi, IN

Phase 1 — Market Risk · REAP (Track Lead, 2003–2004)

- Defined the end-to-end technical architecture for the REAP risk platform — foundational design reused across all subsequent phases; architected a data warehouse capturing deal and curve data hourly across a 25-year forward horizon
- Implemented Monte Carlo simulation-based VaR engine with configurable parameter management; designed 3D analytical risk visualizations using In3D Visual Insight integrated via TIBCO
- Presented 3D visual risk tools directly to the Cinergy Board of Directors in partnership with the company's Chief Risk Manager; contributed to business development that grew a small engagement into a major multi-year Sapient account
- Led a team of 15 developers; managed all code and non-code releases, UAT, and production cutover; conducted hiring and team onboarding

Phase 2 — Portfolio Optimization · Power (Track Lead & Infrastructure Lead, 2004)

- Built a Grid Computing system for nightly batch job scheduling across the optimization platform; worked directly with HP to procure and configure large-capacity servers; diagnosed and resolved a critical server overheating issue by identifying a BIOS firmware upgrade as the root cause
- Built a centralized SOAP-based valuation service consumed across the Cinergy organization; managed 8 senior developers (team of 28 total); prepared and presented project dashboards to client senior leadership and steering committee

Phase 3 — Fuels & Multi-Commodity + Offshore Build (Track Lead, 2004–2005)

- Founded and built the offshore delivery team in Bangalore — hired, onboarded, and ramped 6 engineers; established a cross-geography delivery model connecting Bangalore with client operations in Cincinnati and Houston
- Extended the optimization platform to cover Gas, Coal, Propane, and Emissions; defined incremental release plans; instituted long-term production support processes for EOD operations

Phase 4 — Regulated/Deregulated Compliance Split (System Architect & Sole Delivery Lead, 2005–2006)

- Sole Delivery Lead on a fixed-time, fixed-budget FERC regulatory compliance program — no schedule or cost overrun; regularly attended Cinergy Board of Directors meetings to provide program status updates directly to the Chief Risk Officer
- Architected data-level and application-level security split across 8 systems (CMA, RMA, Risk Portal, Reconciliation, Ad-Hoc Analysis, Crystal Reports, Visual Insights, Reporting Tree) with Active Directory-based access controls

- Managed full vendor transition — structured handoff of all applications and documentation to the incoming support vendor; worked closely with Cinergy developers and support staff throughout knowledge transfer

NYISO — New York Independent System Operator

Open Scheduling System (OSS) — Statewide Power Grid Market Platform · March 2002 – February 2003

Albany, NY · Travel: Boston–Albany

- Built core components of OSS — the platform enabling market participants across New York State to schedule power usage and submit price bids through the Day-Ahead Market (DAM) and Hour-Ahead Market (HAM)
- Contributed to technical architecture and business system specifications; built production Swing modules and supported integration with the PJM grid operator interface

Notable: Had code reviewed by Grady Booch, co-creator of UML and pioneer of object-oriented design.

Royal Bank of Scotland · Foreign Exchange Micro Payments (FXMP)

London, UK · November 2001 – March 2002

- Designed and developed Swing-based trading screens for FX rate viewing and transaction execution; built and deployed EJB components integrating FXMP with Rates and Blending engines

Janus Institutional Investors · Institutional Sales Self-Service Toolbox

Denver, CO · March 2001 – November 2001

- Owned infrastructure across 11 servers and 13 integrated software components; implemented and maintained single sign-on via SiteMinder; served as DBA and central point of contact for all third-party vendors and deployment issues

PowerShare Inc · Online Trading & Portfolio Management Platform

Westboro, MA · August 2000 – February 2001

- Module lead for a Java Swing-based trading SaaS targeting the Indian market; designed and built a configurable rules engine, real-time Reuters ticker feed via TIBCO messaging, and owned all functional and technical aspects of the PS-Tools module

Notable: Demoed the platform to an ICICI Bank-backed VC group; presented directly to KV Kamath and Lalita Gupte.

CONSULTING & ENGAGEMENT MANAGEMENT (SAPIENT CORPORATION, 2000–2013)

- Managed client contracts, change orders, and scope negotiations across multiple engagements; provided revenue forecasting and budget guidance to Sapient Finance teams
- Delivered against fixed-time, fixed-budget commercial structures across regulated industries; presented at Board and C-suite level (Cinergy Board of Directors / Chief Risk Officer)
- Led planning exercises with clients and multi-vendor partner groups; conducted structured requirements-gathering with business stakeholders across financial services and energy trading
- Built and grew teams from scratch onshore and offshore; conducted numerous hiring interviews; founded the Bangalore offshore delivery team for the Cinergy engagement
- Managed complete knowledge transition at engagement close — worked closely with client developers, support staff, and incoming vendors to ensure fully supported handoffs on every program

EDUCATION

Wharton School, University of Pennsylvania

Executive CTO Program

UC Berkeley School of Information

Master of Information & Data Science (MIDS)

Cochin University of Science and Technology

Bachelor's in Computer Science