

# Nigel Jones

Staff/Principal AI Software Engineer | Generative Programming & Reliable AI

Brighton and Hove, United Kingdom

Email: [nigel.l.jones@gmail.com](mailto:nigel.l.jones@gmail.com) | LinkedIn: [linkedin.com/in/nigelljones](https://www.linkedin.com/in/nigelljones) | GitHub: [github.com/planetf1](https://github.com/planetf1)

DOWNLOAD

PDF CV

---

## Executive Summary

Pragmatic, full-stack software engineer specializing in generative programming and agentic AI frameworks within IBM Research. With a 35-year track record of shipping enterprise production code—spanning from AIX kernel modifications and global voice response systems to post-quantum cryptography—I bridge the gap between the probabilistic nature of LLMs and the rigorous predictability required for enterprise software. I am a tenacious, deep-thinking troubleshooter who digs from the UI down to the OS to uncover root causes. My focus is singular: engineering complex, open-source AI architectures into secure, observable, and highly reliable tools that developers can trust in production.

## Core Technical Competencies

- **Languages & Data:** Python, Java, C, C++, Go, Rust, JSON, YAML
- **AI & LLM Ecosystem:** BeeAI, Mellea, crewAI, OpenAI, Amazon Bedrock, Google Vertex AI, Grok, RAG architectures
- **Infrastructure & CI/CD:** Kubernetes, Docker, Helm, Tekton, GitHub Actions, DORA Metrics
- **Systems & Environments:** macOS (VSCode), advanced Linux/Unix debugging and system administration

---

## Professional Experience

**Software Engineer, AI Foundations** | IBM Research | 2026-01-01 - Present

- **Architecting Enterprise AI:** Engineering the core tools, libraries (Mellea), and frameworks required to make generative AI reliable, observable, and usable for enterprise developers.
- **Generative Programming:** Pioneering execution pathways that force probabilistic LLMs to adhere to rigorous, deterministic software engineering standards, directly accelerating safe AI adoption.

**Software Engineer, Quantum + AI** | IBM Research | 2025-01-01 - 2026-01-01

- **Shipped BeeAI:** Led core backend engineering for the inaugural release of the open-source BeeAI agentic framework, delivering a robust, enterprise-grade architecture for complex AI workloads.
- **Cross-Domain AI Integration:** Prototyped and applied experimental agentic frameworks to accelerate IBM's quantum research, establishing early AI adoption patterns across disparate deep-tech teams.
- **Mentorship & RAG Architecture:** Directed an international engineering cohort to successfully prototype a Graph Retrieval-Augmented Generation (Graph RAG) system, expanding the team's applied AI capabilities.

## Software Engineer, IBM Quantum | IBM Research | 2023-06-01 – 2024-12-31

- **Infrastructure Modernization:** Architected and executed the technical migration of IBM Quantum's CI/CD pipelines to a Tekton-based Kubernetes environment, eliminating legacy bottlenecks and drastically improving backend resilience.
- **Delivery Optimization:** Implemented DORA metrics across global development teams to actively measure, expose, and improve software delivery performance and operational reliability.
- **Open Source Leadership:** Served as the Technical Steering Committee (TSC) Lead for the Post-Quantum Cryptography Alliance (PQCA), translating highly complex mathematical cryptographic standards into accessible, quantum-safe implementations for the global open-source community.

## Open Source Founder & Core Maintainer (Egeria) | IBM | 2017-01-01 – 2023-06-01

- **Ecosystem Creation:** Co-founded and scaled the **Egeria** open metadata project from initial enterprise banking architectural discussions into a global standard under the LF AI & Data foundation.
- **Full-Stack Scaling:** Drove the end-to-end engineering of the project's infrastructure, implementing rigorous static analysis, solving supply chain security vulnerabilities, and engineering enterprise production deployment patterns using Kubernetes and Helm.

## Information Solutions & Architecture Leadership | IBM | 1992-03-01 – 2016-12-31

- **Data Lake & InfoSphere Architecture:** Architected enterprise Data Lake solutions utilizing Apache Hadoop and Apache Atlas, establishing the foundational strategy that led to the creation of Egeria.
- **Master Data Management:** Architected and optimized the IBM MDM Server, focusing on performance scaling and z/OS integration.
- **Core Systems Engineering:** Led full-stack development for IBM Voice Response (DirectTalk). Engineered device drivers, state engines, and executed deep systems integration including AIX kernel modifications.

---

## Open Source Leadership & Advocacy

- **Technical Steering Committee Lead:** Post-Quantum Cryptography Alliance (PQCA), The Linux Foundation (2023 – 2025)
- **Project Co-Founder & Maintainer:** ODPi Egeria, LF AI & Data (2017 – 2023)

---

## Publications & Speaking Engagements

- **Panelist:** *Quantum-Ready Kubernetes: How Do We Get There?* – KubeCon + CloudNativeCon Europe (2025-04-01)
- **Speaker:** *Harvest Now, Decrypt Later: Managing the Threat From Quantum Algorithms* – State of Open Con (2024-02-06)
- **Tutorial Lead:** *Building an Open Metadata Ecosystem (Egeria Dojo Series)* – Linux Foundation (2022)
- **Author:** *Designing and Operating a Data Reservoir* – IBM Redbooks (2015-05-26)

---

## Education

**BSc (Hons), Physics and Computer Science** The University of Manchester (1987 – 1990)