

EDUCATION

MSc Computer Science | University of Manchester - 2019-2021

Distinction. Thesis: Composable layout primitives for deterministic document rendering.

BSc Software Engineering | Imperial College London - 2015-2019

First-class honours. Specialisation in compilers and static analysis.

Oracle Java Certification | Professional track - 2023-2024

Java 17 platform deep-dive: records, sealed types, pattern matching, virtual threads.

TECHNICAL SKILLS

Languages: Java 21, Kotlin, Groovy, Python, SQL

Document & Print: PDFBox, Apache POI (DOCX/XLSX), iText, PostScript, ICC colour profiles, font metrics

Layout engines: Custom DSL design, semantic layout trees, pagination, snapshot testing, visual regression

Build & infrastructure: Maven, Gradle, GitHub Actions, JitPack, Docker, JMH benchmarking

Testing: JUnit 5, AssertJ, PDFBox-based PNG diff, layout-graph snapshots, mutation testing (Pitest)

Distribution: Maven Central, Sonatype OSSRH, GPG signing, JitPack, semantic versioning discipline

PROJECTS

GraphCompose (Java 21, PDFBox, Maven, JMH): Declarative Java PDF layout engine. Semantic DSL, slot-based templates, snapshot testing. Powers production CV / invoice / proposal pipelines for hiring tools and billing systems. (Open source)

Template Studio (Kotlin, Compose Desktop, PDFBox PNG diff): Internal tool for evaluating CV, proposal, and invoice output across 14 design presets. PNG diffing, side-by-side layout, baseline freezing.

LayoutLint (Java 21, JavaParser, Spoon): Static analyser that flags fragile authoring patterns (deeply nested rows, untyped offsets, implicit page breaks) before they ship to production.

ChromeForge (Java, GraphCompose, Pandoc bridge): Editorial-magazine document toolkit built on GraphCompose: cinematic covers, pull quotes, multi-column flow, sidebar callouts.

PROFESSIONAL SUMMARY

Platform engineer with 10+ years building resilient document-generation pipelines, layout engines, and developer-facing template systems. Specialised in high-throughput PDF rendering, semantic authoring DSLs, and turning brittle production-ops scripts into typed, snapshot-tested libraries that scale.

PROFESSIONAL EXPERIENCE

Senior Platform Engineer | Northwind Systems - 2024-Present

Led the reusable document-generation platform serving billing, hiring, and reporting flows across 8 product teams. Reduced template maintenance time by 70% by retiring per-team PDF scripts in favour of one canonical engine.

Software Engineer | BrightLeaf Labs - 2021-2024

Built backend services and production document rendering pipelines processing 2M+ documents per month. Drove the migration from iText to a custom layout engine, eliminating licensing risk and cutting p99 render latency from 1.4s to 380ms.

Backend Engineer | Helix Print Co - 2019-2021

Maintained a high-volume invoice-printing service (15M PDFs/year) and authored the compliance test harness that gated every template change.

ADDITIONAL INFORMATION

Languages: English (Fluent), German (Intermediate), Spanish (Basic)

Work Eligibility: Eligible to work in the UK and the EU

Open Source: Maintainer of GraphCompose. Regular contributor to PDFBox issue triage.

Speaking: JVM Summit 2024, Devovx UK 2025 — both on declarative document layout.

