

Michael J. Grafton

PRINCIPAL SOFTWARE ENGINEER

Abington, MA | (781) 789-0848 | mikejgrafton@gmail.com | linkedin.com/in/mike-grafton

PROFESSIONAL SUMMARY

Principal software engineer and architect with 25 years designing, building, and modernizing complex systems across frontend, backend, embedded, and platform layers. Specialist in legacy modernization — from compiler-style source-to-source translation of desktop applications to incremental decomposition of web monoliths into independently deployable modules. Currently technical lead on a multi-repository healthcare education platform, owning workflow architecture, cross-service type contracts, and the code review and release practices the engineering team runs on.

Target roles: Principal Software Engineer, Software Architect, Engineering Lead.

CORE TECHNICAL SKILLS

Languages & Frameworks	Java, Spring Boot, TypeScript/JavaScript, Vue, Nuxt, Python, C, C++, PHP, SQL, Visual Basic
Architecture	Configuration-driven platform design, Module Federation & micro-frontends, legacy modernization and source-to-source translation, distributed and embedded systems, RESTful API design, object-oriented design
Platforms & Tooling	GitHub Actions CI/CD, monorepos (pnpm, Changesets), Playwright, JUnit, MongoDB, MySQL, MS SQL Server, Docker, Jira, AI-assisted development tooling

PROFESSIONAL EXPERIENCE

Medlive / PlatformQ — Needham, MA | Principal Software Engineer

2014 – Present

Technical lead across the platform delivering accredited continuing medical education and patient education to clinicians — live broadcast, on-demand, and certification — spanning a dozen Java/Spring Boot services and Nuxt/Vue applications.

Configuration-Driven Workflow Platform — Lead Architect

- Lead architect of the workflow engine that composes learner experiences from typed step and component definitions, letting non-engineers assemble accredited programs without code changes
- Designed the component configuration model and its deserialization into typed backend models, keeping a single source of truth for program structure across services
- Established the contract discipline for shared workflow types after diagnosing a class of silent data-loss defect in which backend models dropped undeclared configuration fields on save; type changes now ship backend-first in coordinated phases
- Built the CME certificate and credit-claim path end to end, from workflow component through learner activity tracking to the generated certificate

Tech stack: Java Spring Boot, MongoDB, Vue, Nuxt, TypeScript

Module Federation Migration

- Lead the initiative decomposing the learner-facing frontend monolith into independently deployable remotes, allowing teams to ship without coordinated releases
- Defined the shared-singleton strategy for framework and component-library dependencies across the host/remote boundary
- Introduced a version gate that builds and type-checks every candidate head before merge, closing a failure mode in which Module Federation resolves version mismatches with only a console warning

Tech stack: Nuxt, Vue, TypeScript, Module Federation, Vite, GitHub Actions

Engineering Practice & Delivery Quality

- Set and run the team's review practice: multi-repository code review with written findings committed to the branch, ticket closeout standards, and release-branch policy
- Orchestrate multi-service deploys across environments via GitHub Actions, and verify deployed builds with Playwright suites targeted at the changed area
- Sequence releases for changes spanning the shared internal package libraries and the applications consuming them, keeping published versions and consumers in step
- Drove team adoption of AI-assisted development, authoring reusable tooling that encodes commit conventions, the review workflow, and ticket closeout so the process holds regardless of who runs it

- Mentor engineers through design and pull request review, and partner with product on epic scoping, acceptance criteria, and release planning

Nexaweb Technologies, Inc. — Burlington, MA | **Senior Software Engineer**

2012 – 2014

Built tooling that transformed legacy desktop applications into J2EE web applications through automated code generation and runtime emulation.

Visual Basic Modernization Tool

- Designed, developed, and implemented a Java transformation tool converting Visual Basic 6.0 projects into Java web applications
- Walked the lexical and syntax trees of VB source to emit equivalent Java applet syntax, mapping VB built-in library calls onto their Java runtime equivalents
- Converted application UI in parallel with the code path, translating VB form layouts into the company's proprietary XML rendering format
- Developed requirements and led a team of outsourced engineers implementing the Visual Basic to Nexaweb model generator

Tech stack: Java, J2EE, XML, SVN, Jira

PowerBuilder Bridge

- Implemented PowerBuilder features within the Nexaweb Java platform to keep legacy transformations behaviorally faithful
- Diagnosed and resolved defects in transformed Java applications, in both customer application code and the Bridge itself
- Partnered with QA on test plans and fix verification, and linked Jira issues to SVN revisions to maintain fix-to-release traceability

MITRE Corporation — Bedford, MA | **Lead Network & Distributed Systems Engineer**

2003 – 2012

Embedded Systems

- Led design, development, test, and deployment phases of the software lifecycle for embedded capabilities written in C
- Designed and built new embedded prototypes, and ran design and code reviews covering both architectural strategy and code correctness
- Developed a C++ plug-in for a GUI application driven by Glade XML definitions over a MySQL backend
- Configured complex network environments supporting distributed systems work

Tech stack: C, C++, VxWorks, Glade, MySQL, Linux

Web Application Framework & Project Tooling

- Architected a framework for rapidly composing web forms, abstracting the interface to MySQL data behind object-oriented PHP classes
- Built a web project management tool on that framework featuring bug tracking, project and task management, a shipment registry, and phone call logging
- Architected the schema definitions for backend MySQL databases across multiple projects
- Automated operating system updates across lab machines using autorm

Tech stack: PHP, MySQL, Apache, Linux

Beth Israel Deaconess Medical Center — Boston, MA | **Application Developer**

2001 – 2003

- Developed and enhanced Visual Basic applications and ASP web applications presenting clinical information to hospital staff
- Migrated VB code and SQL Server stored procedures through a development tool upgrade, resolving anomalies across applications, stored procedures, and Crystal Reports
- Built SQL routines importing data from legacy systems, and established test and production release procedures

Logical Resources, LLC — Westwood, MA | **E-Commerce Web Developer**

2000 – 2001

- Built and maintained e-commerce sites in ASP and SQL Server, including the stored procedures backing page operations
- Maintained the development server and source control database, and evaluated design approaches for client solutions

EDUCATION

M.S., Computer Science — Worcester Polytechnic Institute, Worcester, MA

2007

B.S., Computer Science — Northeastern University, Boston, MA · Dean's List, Honors Program

2000