John Rogers
Senior Backend & Systems Engineer

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Portfolio: https://john-rogers-portfolio-production.up.railway.app
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Profile

Senior backend-focused engineer with professional experience building data analytics systems in regulated healthcare environments, followed by independent work exploring ML-backed services and system reliability. My professional background emphasizes correctness, auditability, and explicit constraint enforcement (HIPAA/GDPR), while recent work focuses on AI-adjacent system design, failure semantics, and production-style testing.

I am most effective in backend and platform-adjacent roles where reliability, clarity, and sound engineering judgment matter more than novelty.

Professional Experience

Software Engineer – Data Analytics

Merative (formerly IBM Watson Health) · Dublin · **2022–2024**

- Built and maintained backend services and React frontends for healthcare analytics platforms operating under HIPAA and GDPR constraints
- Implemented access controls, audit logging, and data validation for PHI-containing datasets
- Worked extensively with Snowflake data warehouses and complex, multidimensional healthcare data

Software Engineer – Healthcare Analytics

IBM Watson Health · Dublin · **2018–2022**

- Developed analytics and reporting systems for regulated healthcare data
- Built Cognos reports using Cognos SQL and MDX
- Implemented automated Java test suites validating data integrity and access control

Software Engineer – Watson Workspace

IBM · Dublin · **2016–2018**

- Built an automated localisation pipeline in Ruby
- Implemented pagination and batching in ETL pipelines handling large datasets
- Added automated test coverage using Selenium and JUnit

Earlier Career (Non-Software Roles)

Prior to transitioning into software engineering, I held operational leadership roles including: - Restaurant Manager at McDonald's, responsible for team leadership, scheduling, and operational quality - Manufacturing Team Lead at IBM, responsible for coordinating production teams and enforcing process discipline

These roles shaped a practical, execution-focused approach to work and comfort with responsibility in operational environments.

Selected Engineering Projects

ForgeBreaker — Explainable MTG Arena Deck Analysis

Live demo: https://john-rogers-portfolio-production.up.railway.app
Code: https://github.com/JohnRogers-Code-projects/ForgeBreaker

Production-style backend system enforcing Arena legality, collection-only deck construction, explicit refusal, and mechanically enforced failure semantics. Designed to prevent hallucinated outputs by architecture, with extensive automated testing and CI enforcement.

MLForge — ML Inference & Lifecycle Service

Code: https://github.com/JohnRogers-Code-projects/MLForge

Standalone ML inference service emphasizing model lifecycle boundaries, deliberate failure modes, rollback semantics, and observability. Integrated with ForgeBreaker via a real service boundary.

MCP-Demo — Constrained AI Tool Invocation

Code: https://github.com/JohnRogers-Code-projects/MCP-Demo

Experimental implementation of the Model Context Protocol focused on explicit capability boundaries and principled refusal patterns. Framed as an architectural experiment rather than production infrastructure.

Technical Skills

Languages: Python, Java, TypeScript/JavaScript, SQL, Ruby, R
Frameworks: FastAPI, Spring Boot, React, Pydantic
Data: PostgreSQL, MySQL, Snowflake, DB2, Oracle
Practices: API design, backend systems, ETL pipelines, Docker, automated testing
AI / ML: ML inference pipelines, constrained LLM invocation, explainable systems

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Education

BSc Computer Science (First Class Honours)
National College of Ireland, Dublin

Final Year Project: Outlier visualisation in N-dimensional categorical datasets (R, Tableau, AWS EC2)