Daniel Layeghi

Website: daniellayeghi.github.io
Email: daniellayeghi@gmail.com
LinkedIn: daniellayeghi
GitHub: github.com/daniellayeghi

Education

The University of Edinburgh — Edinburgh
Ph.D. in Computer Science — 2020–Aug 2024
- Thesis: Optimal Control Theoretic Value Function Learning (Link)

Queen Mary University of London — London
MEng in Mechanical Engineering, First Class Honours — 2013–2017
- Thesis: Implementation of Motion Tracking Algorithms for Inertial Measurement Units
- Project: Design and Development of Upper Limb Exoskeleton

Experience

Z2-labs
Co-founder — 2025–2026

Built Souida (souida.com), an API-first discovery layer for independent booksellers that turns natural-language queries into structured, real-time retrieval over a retailer's inventory while preserving ownership of traffic and data
- Built an asynchronous annotation pipeline with a provider-agnostic inference interface, sustaining ~10M tokens/min throughput; built a PyTorch-based embedding service (259k+ requests; >99.99% success)
- Implemented FAISS-based multi-field vector search with versioned indexes and in-memory serving
- Deployed on self-managed Kubernetes with per-tenant containers and explicit CPU/RAM
- Worked with independent booksellers on partnerships, onboarding, and production integrations

The University of Edinburgh — Edinburgh
Ph.D. and Postdoctoral Researcher (1 yr), Computer Science — 2020–Aug 2025

Papers
- Optimal Control via Combined Inference and Numerical Optimization (ICRA, Code, Video)
- Neural Lyapunov and Optimal Control (arXiv, Code)
- Learning Long-Horizon Robot Manipulation Skills via Privileged Action (CoRL, Video)

Teaching and Supervision
- Teaching Assistant, Advanced Robotics
- Supervised 3 MSc/BSc students

Automata Technologies — London
Lead Robotics — 2017–2019

Early engineering lead; architected the robotics platform from first principles and led its transition from prototype to commercial deployment; later deployed in NHS COVID-19 PCR labs and underpinned the company's $50M+ Series B (~$70M+ total funding at the time)
- Built production-grade robotics stack from scratch, including friction identification, model-based torque control, trajectory optimization, collision detection, and FK and IK solvers.
- Led prototype-to-production, establishing validation, calibration, and diagnostics for reliable manufacturing and deployment QA
- Partnered with early customers to define requirements and product positioning, aligning technical capability with commercial strategy

Skills

- **Proficient:** C++, C, Python, JAX, Pytorch, CI/CD, Kubernetes, Docker, Git, Linux